

The Open Court

A MONTHLY MAGAZINE

Devoted to the Science of Religion, the Religion of Science, and the
Extension of the Religious Parliament Idea

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CHICAGO

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JOHN BERNARD STALLO.

Frontispiece to *The Open Court*.

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JAMES MARTINEAU.

BY MONCURE D. CONWAY.

WHEN Theodore Parker went silent, his congregation in Boston Music Hall listened to many different voices, but sometimes they heard that of which Carlyle said, "I hear but one voice and that comes from Concord." When Emerson was to give the Sunday discourse the Hall was crowded with the most cultured people in Boston and its suburbs, and some came from Salem, Lynn, Concord. The last sermon I heard in America before leaving for England, thirty-seven years ago, was from Emerson. Familiar as I was with his lyceum lectures they could not with all their charm prepare one for this inspiration, this fountain of spiritual power, this pathos that filled our eyes with tears. And this was the man who was lost to the pulpit because the Unitarian Church preferred the sacramental symbols of a broken body and shed blood in ancient Judæa to the living spirit rising above the dead symbols! Great as Emerson was in literature, his hereditary and natural place was in the pulpit, which his essays did indeed leaven, under whatever sectarian forms, but only along with more admixture of chaff than of honest meal.

With Emerson's wonderful sermon still ringing in my ears I voyaged to England, and the next sermon I heard was from James Martineau. His chapel (in Little Portland street) was a relic of a time when among dissenters there was a sort of cult of ugliness. Fine architecture and stained glass were decorations of the 'Scarlet Woman' whether Roman or Anglican. In the gloomy little chapel I waited until the man should appear whose "Endeavours after the Christian Life" had brought me help in my solitude, far away in Virginia and Maryland, when I was groping along my

thorny path out of the orthodox ministry. When Martineau presently ascended the pulpit I was impressed by his noble figure, but when his face shone upon us through the chapel gloom, when his voice so gracious and clear was heard, and his lowly simplicity witnessed the greatness of his thought, I said, this is Emerson again! It is Emerson not banished from his pulpit, but made into the Unitarian leader!

It is true that neither in this first sermon that I heard from him, nor in others, did Martineau work the miracle that we witnessed when Emerson occasionally re-ascended the pulpit. That cannot be done in a gown, beneath which wings must be folded. But this English minister was meeting the spiritual need and hunger of spirits finely touched to fine issues. In his audience, generally between 300 and 400, none but a few children (for most of these listened to him in a separate service) had come casually, or except by inward attraction. They did not come for God's sake, nor for any show of either conformity or non-conformity, but were individual minds taking to heart things generally conventionalised. There sat Sir Charles Lyell, who had substituted a scientific account of the earth's formation for that in Genesis, and who with his beautiful and intellectual lady kept abreast of religious studies; there was Miss Frances Power Cobbe, author of the ablest work on Intuitive Morals, and her friend Miss Lloyd; there was his own son Russell Martineau, the great Hebraist, whose veracity prevented his acceptance of a place among the Revisers of the Authorised Version (1881) because they had determined on the retention of certain admitted but sacred mistranslations; there were the students of the Unitarian Divinity College (now removed to Oxford) trained to become the teachers,—such as the present professors Estlin Carpenter and Drummond, and Charles Hargrove, of Leeds, where his "Mill Hill Pulpit" has become a rational and moral Sinai in rebuke of belligerent injustice, cruelty, and vengeance. But it would be a long catalogue that should name the distinguished men and women who found their nurture or their nourishment in that small chapel in its obscure little street, and who in the beauty and wisdom and exaltation of Martineau's discourse did not envy the cathedrals their splendid altars or arches or flaming windows. When, as time went on, I gradually knew more about the variety of minds gathered around the great preacher, and how widely different opinions were developed under his teaching, along with unity of sentiment, this impressed me as an especial sign of their teacher's art and genius. Buddha described the Great Law as the rain fall-

ing on the thirsty earth, where each grass-blade, each flower, each tree, drew up into itself that which was needed for its several growth and fruit.

Emerson remarked to me, when I was at Divinity College, that he had observed more progressiveness and enthusiasm in ministers



JAMES MARTINEAU.

who had come out of orthodoxy than in those born in Unitarian families. It is natural that those whose freedom has involved struggle and personal distress should carry a certain polemical heat into their ministry. But this is at some cost. Of this I was reminded by the remark of another great American, Dr. Oliver Wen-

dell Holmes. The last time I met him, and it was not long before his death, he said, "You and I have spent some of the best years of our lives merely clearing away the rubbish out of our path." The career of Martineau, born and trained among liberal thinkers, suggests that the better service may be done by those who have had no personal quarrel with the dogmas and superstitions they have to clear away from the paths of others. Less smoke mingles with the flame of their lamp. They speak from an elevation above the suspicion of animus or bias.

A man may too, according to Darwin, inherit from his ancestors characteristics which they had to acquire. Old David Martineau the Huguenot, who founded the race of Martineaus in England, layman and surgeon as he was, had yet enough enthusiasm for his Protestantism and his Calvinism to leave his home and country rather than surrender his principles to the French persecutors, and he endowed his descendants with the courage and self-truthfulness which led them to migrate from Calvinism, and next from orthodoxy. So that James Martineau's personal conflict with orthodoxy preceded his birth, while the force represented in it was not lost but transmitted to James, to Harriet, to the admirable artist Martineau, to Sir Robert Martineau who did so much for the culture and welfare of Birmingham.

At Norwich they point out to strangers the old home of the Martineaus. The Huguenot and his son Philip were surgeons of high rank in science and both are represented in the *Philosophical Transactions* by memoirs on professional points of importance. James Martineau also aspired to a scientific, though not to a surgical or medical, career. Yet one may say that it was the healing instinct in him that prevailed when he abandoned in youth the studies of a civil engineer to deal with the mental and moral diseases of his time.

And what operations did this gentlest of physicians perform during his long life! The England into which he was born was one now almost incredible. When Martineau was a studious boy in his fifteenth year, already well taught in the free and tolerant religion which Quakerism and Unitarianism had made the very atmosphere of Norwich, churchmen and dissenters had united to suppress the publication and circulation of theistic literature. The traditions of England being on the side of liberty of printing, these theological persecutors had to avail themselves of a moral disguise: they utilised the Society for the Suppression of Vice. On the ground that denial of the divine inspiration and authority of the Bible was

an attack on public morals, two particularly moral books were fixed on for prosecution, and in 1819 Richard Carlisle was sent to pass nine years in prison for publishing them, and his wife and even their shop boys imprisoned for selling them. The two books were Paine's *Age of Reason* and Palmer's *Principles of Nature*. Any one who reads those works will know that they are not only morally clean but written mainly in defense of a higher standard of morality than biblical authority admits or sanctions. Now, both of the books are traceable to the heretical atmosphere for which Norwich was historically celebrated and which included the neighboring town of Thetford, where Paine was born. And Palmer, the scholarly American clergyman, converted by the *Age of Reason*, affirmed in his *Principles of Nature* ideas that startlingly anticipate the philosophy of Martineau. The books for which publishers and booksellers were imprisoned simply raise the "inner light" of conscience and reason above the scriptures of barbarous ages, as it was raised in the two Quaker meeting-houses of Norwich and others in Norfolk, and also by Martineau's masters, Carpenter and Wellbeloved, and it must have been a shock to these liberal thinkers that such a persecution could occur. The outrage was more grievous because the prosecutors arraigned liberal criticism as immorality, and worst of all, many London Unitarians, panic-stricken by the fear of being associated with Paine's principles, joined in the persecution.

Young Martineau, conservative in temperament and no doubt also by training, probably had little interest in Paine's political theories, but the peril to free inquiry and printing, its punishment as both vice and crime, involving the best men he had ever known could not fail to stir him deeply. All around him eminent clergymen of all denominations were proving the necessity of suppressing such books by clear warrant of "Holy Writ." The learned laymen were largely deists, but they united with the superstitious masses because the Paine and Palmer propaganda was permeated by opposition to kingcraft as well as priestcraft. This bifold radicalism had become a sort of religion and enthusiasm, and the lurid afterglow of the French Revolution was still visible enough to intimidate even liberal minds.

It must have required a passionate love of truth, and also faith in the people's right to truth, for this handsome young aristocrat to leave his scientific plan and devote himself to the exploration of that Bible to which religious liberty was sacrificed. For the duty of a thinker to utter the truth publicly was a rare doctrine at that time. Intellectual men held the true ethics to be suppression of

the truth. Thomas Carlyle told me that when he came to London he went to hear W. J. Fox preach at South Place Chapel and was shocked at hearing him discussing important problems before people not competent to judge of such matters. He also said that when Strauss published his *Leben Jesu* its views were such as were already held by various men of his acquaintance, but none would have ever thought of publishing them. Carlyle did not approve of Strauss' publishing his book; Tennyson, who substantially agreed with Martineau's views regretted their publication; and even Matthew Arnold in the first steps of his career censured Colenso for not writing his Biblical criticisms in Latin. With regard to Tennyson it should be said that his favor for exclusively esoteric expression of sceptical ideas was due to his tenderness for beliefs in which many found consolation. This Martineau recognised, but wrote, "I cannot see that we are intrusted with any right of suppression when once profoundly convinced of a truth not yet within others' reach." This letter was written to Tennyson's son after the poet's death, and one may form some estimate from this and the other opinions cited how strong was ethical obstruction to the proclamation of truth when Martineau's ministerial career began. Indeed I believe that he may be credited with being the first scholar of high social position who entered on a ministry quite uncommitted to any sect and absolutely consecrated to the search for truth. This was a new departure, and though he was made a Unitarian leader Unitarianism had to come to him, not he to it, and had to follow him.

In fact, I should say that Martineau possessed a very rare kind of genius,—a genius for truth in itself, which is very different from what theologians call "the truth." Through all the creeds and scriptures labelled "the truth," and over the ruins of systems, Martineau followed in every footprint of the ever-advancing spirit of truth. Many years ago, in a small assembly of liberal ministers when I was present, Martineau did away with every vestige of the Messianic theory of Jesus. After the discussion that followed he answered the criticisms of his statement, and finally said, "One argument I must decline to consider, that is the argument from consequences. How our customary phrases, prayer-books, hymns, may be affected by recognition of facts, or whatever may be the practical consequences of ascertained truth, are considerations not pertinent to an inquiry for truth." I may not have the exact words but I have the substance of what Martineau said, for this and the grand calmness with which he affirmed the law, inspired a discourse I gave soon after, printed with the title "Consequences."

I remarked in him a special antipathy to superstition probably derived from his memory of the time when Bibliolatry demanded human sacrifices,—and indeed not merely sacrifices of human liberty, for two deists died of their imprisonment, and the health of all suffered. After returning from India I was mentioning scenes in the religious festivals there, and their resemblance to some in Europe, when he remarked that he had always avoided places where he was likely to witness rites of superstition, as anything of that kind was so repugnant as even to afflict him.

The subscription to articles necessary to enter the English Universities was recognised by most liberal thinkers as a mere form, but Martineau could not be persuaded to sign them, and pursued his studies at the school of Dr. Carpenter in Bristol, and at Manchester College (Unitarian) in London, and then went over to Germany. He returned to England with a better equipment, even in a scholastic sense, than any Oxonian of his time. About sixty years ago the English clergy began to wake up to the terrible fact that a Unitarian minister had arisen who surpassed them all in philosophical culture, in biblical criticism, in Greek, Latin, and Hebrew, also in eloquence, and further that his character and life were in notable contrast with clerical arrogance and cant: Notably unambitious, and with a humility that disarmed intolerance, Martineau felt his vocation to be that of ministry to individual minds and hearts in their doubts and sorrows. But he realised also that his studies and knowledge imposed on him the duty of revising the dogmatic fictions, and correcting the biblical errors, prevailing around him, and doing too much practical harm and injustice to claim the tenderness demanded by Tennyson for consolatory illusions. That dogma and superstition now plead *ad misericordiam* is largely the work of Martineau's persistent criticisms. And yet he took little pains to circulate them, none to popularise them. He wrote articles in the Unitarian *Monthly Repository*, and in the later *Prospective Review*, his chapel was attended by thinkers, and he gave lectures in the Unitarian Divinity College; and it was mainly through these public teachers of his training that the waves of Martineau's influence widened out.

That his long ministry should have been represented by so few publications (*Endeavours after the Christian Life*, *The Rationale of Religious Inquiry*, a collection of his articles, and a few printed sermons) has puzzled those who knew how assiduous he was. My own belief is that Martineau had the habit of a student, that he was continually making discoveries and revising his views, and had

a dread of imprisoning either himself or others in any philosophical finality. I doubt if he was quite conscious of the authority carried by any quotation of his opinion, but he never entrenched himself, and if any one brought him a new view he never seemed to consider at all whether it was in conflict with some published statement of his own. As an instance of the persistence of this student habit into his old age I may mention an incident. A good many years ago I consulted Martineau about the age of the fourth gospel, and his opinion was that it was about the year 170. In 1894 I was conversing with him and he recurred to that answer—many years past—and said he had been much interested in some views set forth by the Rev. Charles Hargrove in a course of lectures at University Hall on the fourth gospel. Mr. Hargrove had given strong reasons for his belief that the fourth gospel was a joint work, and contained matter of different dates, the whole being of earlier composition than its publication. I had myself heard several of Mr. Hargrove's lectures (they have never been printed) and was much impressed by them. Martineau could not go out in the evenings and heard none of them, but no doubt received from the Rev. Philip Wicksteed (his successor in the chapel) the notes which I saw him writing. He (Martineau) had been re-reading the fourth gospel with this new light and was no longer ready to confirm his previous opinion. It struck me as very picturesque to see this scholar in his ninetieth year eager as in youth for more light, absolutely free from pride of opinion, and glad to receive instruction from one of his old pupils brought to him by another. For both Hargrove and Wicksteed had been students in Manchester New College under Martineau.

In 1880 Renan came to London to give the Hibbert lectures. They were given in his faultless French, and at their conclusion Martineau, who at seventy-five had the fire of early years, delivered to the French scholar an address (in English) admirable in taste and thought. We saw on that platform of St. George's Hall the ex-priest from France and the descendant of the Huguenot hunted out of France two centuries before, meeting eye to eye, clasping hands, and that too was picturesque. But that which especially impressed me was the literary relationship between the addresses of the two men. The unique charm of Martineau's style is its essentially French character. Its clearness, simplicity, ease, self-restraint, and its way of taking the reader into personal confidence, are French, and not found in any other contemporary English writer—unless it be Thackeray, who resided so long in Paris.

My reader may partly gather even from these brief notes what had gone through the centuries to the making of that almost ideal preacher to whom we used to listen. But on one Sunday after returning from the pulpit to the vestry, he fainted. Some doctor alarmed the family, and declared Martineau must resign the pulpit altogether. It was a medical blunder, and a disaster to himself. "It has been my life," he said mournfully to Miss Cobbe. And it was the life of others. The most important light-house on a perilous coast had fallen, never to be rebuilt, and the paths of voyage must all be changed. He might have gone on training the moral and intellectual leaders in London for twenty years longer, and we should still have been able to gather from his sermons, college lectures, and manuscripts the substance of the large works published since his retirement from the pulpit.

In reading the three large works of Martineau,—published after he was eighty,—the conviction is continually forced on me that his greatness is in those perceptions of truth which utter themselves in negations, and are all the more fervid and authentic because not accompanied by any general system. It is this quasi-empirical character of the sermon, appealing to the sentiment and the present intelligence without exciting the hesitations that confront generalisations, which give it an advantage over systematised theories. Behind every negation there is necessarily an affirmation; if one denies that $2+2=5$ it is in the strength of $2+2=4$; but when in things not mathematically certain the affirmations underlying negations are utilised for the construction of a philosophy or a theology they do not fit into each other like miraculously carved stones of Solomon's temple.

Martineau's *Types of Ethical Theory*, published in his eightieth year, his *Study of Religion*, published in his eighty-fifth year, and nearly half of the marvellous work of his eighty-sixth year, *The Seat of Authority in Religion*, are records of the intellectual pilgrimage of a learned thinker through the nineteenth century. As such they merit profound study. But in his constructive summing up he appears to me to have created rather than solved problems. Thus with regard to the existence of evil, he starts from the point of Paine and Palmer: natural evil is the result of the forces of material nature; matter was not created out of nothing, but always existed, and the deity is not responsible for the catastrophes wrought thereby. That was the old deism, but Martineau carries it into the theistic age, evolved out of pantheism, and shrinks from leaving such a large part of nature out of the divine government. "I think

of a cause as needing something else to work, i. e., some condition present with it." The term "Almighty" is "warranted only if it is content to cover *all the might there is*, and must not be understood to mean *mighty for absolutely all things*." (*Study*, Vol. I, pp. 400, 405.)

In one of these italicised phrases the deity is relieved of responsibility for the evils in nature but in the other it is re-imposed on him. If he has "all the might there is" his might is in earthquake, volcano, pestilence, despotism. Similar ambiguity appears in Martineau's treatment of moral evil. "Notwithstanding the supreme causality of God, it is rigorously true that only in a very restricted sense can he be held the author of moral evil. He is no doubt the source of its possibility." It is admitted that if God foreknows everything then everything is predetermined, otherwise he could not foreknow it. But Martineau holds that Omniscience has limited itself with regard to the details of human action, and provided "simply that no one of the open possibilities should remain in the dark and pass unreckoned, and that they should all, in their working out, be compatible with the ruling purposes of God, not defeating their aim, but only varying the track."

But does a supreme cause escape responsibility by blindfolding itself? It is the nature of these possibilities, all planned, that makes the moral dilemma of Theism, as much as predetermination of details. For instance that the worst people are able not only to wrong themselves but to cruelly and permanently injure others, the innocent and helpless.

At times Martineau appears to forget that there is no problem, strictly speaking, about evil at all, either physical or moral, except through the importation of the idea of a personal creative power responsible for both the moral order within us, and the un-moral order without us.

In his *apologia* for deity, in respect of the sin and suffering in the world, Martineau's subtle elaboration so restricts the divine responsibility for terrestrial affairs that one now and then pauses to ask the utility of such a rarefied and remote causality. A king summoned the sculptor to carve something pretty on his favorite bow; nothing could be more marvellous than the hunting-scene sculptured, but on the first attempt to shoot with it the bow broke to pieces. In Martineau's picture of the benefits of suffering, and the advantages of a moral freedom which involves the possibility of sin, he has hardly considered the fragile substance worked on. The struggle for life, he says, "accomplishes the maximum of good

with the minimum of evil." But the terrified and trembling mouse with which a cat plays before devouring it, presents a gratuitous torture. In fact, the neat generalisation breaks in Martineau's own hand when he comes to consider human anguish, for his veracity forces him to admit that on average human nature pain does not have an improving but a hardening effect; it is only the choice spirits that are ennobled by it. Thus it seems that to him that hath is given while from him that hath not is taken away even that which he hath,—his comfort,—without any moral compensation at all! But have the great souls been made greater by pain and sorrow? Shakespeare, Goethe, Franklin, Darwin, Emerson, Martineau himself, were prosperous and happy men. But apart from that—granting that pain and disease have all the best effects ever attributed to them—the real problem is not touched at all. The dilemma is that an omnipotent power, *ex hypothesi* unrestricted in its choice of means, should not have secured all best effects without the anguish and the sin. And is free agency so valuable as all that? It is just here Martineau's elaborately-carved theory breaks in his hands at last. "If," he says, concerning the benefits of suffering and the freedom to sin,—“If you ask me why they are not given us *gratis*, I hold my peace, till you have shown me whether that would have been better for anything but our ease; and whether, in case of such gift, the *thanks* would have followed.”

But what is the matter with “ease,” that it should be despised in a world weary and heavy laden, where all great energies are engaged in securing it in heart and home, for self, for the suffering, for the toil-driven millions? And what sort of deity would be one so egoistic as to weigh his craving for *thanks* against the happiness of his creatures?

Let me hasten to say that if Martineau's theology lays itself open to criticisms like these, it is because of his very untheological veracity of mind. He does not intentionally suppress facts or arguments that oppose him, though he may not have always kept quite abreast of the ethical philosophy of the last thirty years. And let me also warn those who have not read the large works to which I have referred, that brevity has compelled me to compress such references to an extent that leaves out of view the literally great value of the volumes. They contain finest estimates of the greatest philosophers and of their theories, from Plato to our own time, written in a style so lucid and charming that his fellow-pilgrims through the ages of thought are refreshed and sustained along paths usually found flinty and dusty. He may not carry us any nearer to

the philosophic goal, perhaps because the goal is in Utopia, but to us who remember the great preacher there are immortal pages that recall the wonderful sermons,—sermons that at times enabled me to understand that young Athenian who exclaimed in the grove, “O Socrates, to listen to these discourses of thine is in itself a sufficient end of existence!”

And after all it was these wonderful sermons, continued through fifty years, influencing the most cultured circle in London, which changed the intellectual and spiritual atmosphere not merely of the metropolis but of the seats of learning; insomuch that Martineau himself, honored at Oxford with special *éclat*, was a monumental evidence that the bigotry and intolerance amid which his ministry began had passed away.

In 1891 I visited my old friend Francis William Newman at Weston-super-Mare. He was travelling on towards his ninetieth year, but his faculties were bright, and he was deep in those recollections which were presently embodied in his publication concerning his brother, the Cardinal, then recently deceased. During the day we walked a good deal, and he gave me his memories of the sufferings he and others had to undergo, the humiliations and alienations, in their early pursuit of religious truth. After a description of the intolerant Oxford of his time Newman took down from a shelf in his library Martineau's *Seat of Authority in Religion* and read aloud the following:

“As I look back on the foregoing discussions, a conclusion is forced upon me on which I cannot dwell without pain and dismay; viz., that Christianity, as defined or understood in all the Churches which formulate it, has been mainly evolved from what is transient and perishable in its sources; from what is unhistorical in its traditions, mythological in its preconceptions, and misapprehended in the oracles of its prophets. From the fable of Eden to the imagination of the last trumpet, the whole story of the Divine order of the world is dislocated and deformed. The blight of birth-sin with its involuntary perdition: the scheme of expiatory redemption with its vicarious salvation; the incarnation, with its low postulates of the relation between God and man, and its unworkable doctrine of two natures in one person; the official transmission of grace through material elements in the keeping of a consecrated corporation; the second coming of Christ to summon the dead and part the sheep from the goats at the general judgment:—are all the growths of a mythical literature, or Messianic dreams, or Pharisaic theology, or sacramental superstition, or popular apotheosis. And so nearly do these vain imaginations personify the creeds that not a moral or spiritual element finds entrance there except ‘the forgiveness of sins.’ To consecrate and diffuse, under the name of ‘Christianity,’ a theory of the world's economy thus made up of illusions from obsolete stages of civilisation, immense resources, material and moral, are expended, with effect no less deplorable in the province of religion than would be, in that of science, hierarchies and missions for propagating the Ptolemaic astronomy, and

inculcating the rules of necromancy and exorcism. The spreading alienation of the intellectual classes of European society from Christendom, and the detention of the rest in their spiritual culture at a level not much above that of the Salvation Army, are social phenomena which ought to bring home a very solemn appeal to the conscience of stationary Churches. For their long arrear of debt to the intelligence of mankind they adroitly seek to make amends by elaborate beauty of ritual art. The apology soothes for a time,—but it will not last for ever."

While the aged Professor Newman read this he used a magnifying glass, and through it his eye glowed and almost flamed. Laying down the book he exclaimed, "And now the man that wrote that has been made Doctor of Laws by the University of Oxford!"

That honorary degree conferred on Martineau was the triumph of the Broad Church, but all the courage of his admiring friends, Professor Jowett and Dean Stanley, could not prevent the evasiveness of making the degree L.L.D. instead of Doctor of Divinity. It was proved, however, that along with the development of a Martineau outside the English Church there had been developed inside it a clergyman equally liberal. Such was Jowett. Martineau himself told me that when he went on to receive his degree he was the guest of Jowett, the other guests being George Henry Lewes and his wife, "George Eliot." One day, said Martineau, when I was alone with Professor Jowett, he said to me, "I am disappointed in George Eliot: She merely denies the authority of the Bible, and there stops!"

When the Rev. Stopford Brooke, the most brilliant preacher in the English Church in London, having adopted Unitarian views, announced his determination to leave the Church, Dean Stanley tried to dissuade him. Knowing the Dean's love of Martineau, Stopford Brooke said to him,—“Could James Martineau be made Archbishop of Canterbury?” “No,” answered the Dean. “Then,” said Stopford Brooke, “the Church is no place for me!”

This incident was related to me by Stopford Brooke himself, in a conversation in which I maintained that it was a mistake for clergymen who had entered the Church honestly to resign on becoming un-orthodox. They ought not so to relieve the Church of its responsibilities, but to proclaim their heresy boldly and compel the Church either to expel them or to admit that its pulpit is open to heretics. Were every clergyman who becomes un-orthodox to force on the national Church the alternatives of a prosecution for heresy or its toleration, the religious genius of England which steadily abandons its Church would return to it, the recital of its creeds be made optional, and an evolution follow that must either

fossilise the Canterbury throne or fill it with some spiritual descendant of James Martineau.

Perhaps it is the most significant thing connected with Martineau's death that the orthodox clergy and ministers should be eagerly claiming him as their own. He was less orthodox than the men sent to prison in the earlier part of the century, but he held to a certain species of Christianity: he clung to the last to a Christ who was the perfect man, and the revelation of the Father by his life and spirit. It was a sort of evolution of the fourth-gospel Christ, as he had quite given up the miracle-worker of the synoptics. That after all his negations of Bible authority and of the creeds the orthodox should claim him indicates their sore need of an eminent scholar, whose opinion is not merely professional, to advocate even a relic of Christianity. That a great and learned man, unbiassed by position or salary, should believe that Christ was in some special sense a providential man, and the typical man, has become so rare a phenomenon that all the orthodox sects clutch at it, rejoice over it, and are thus really calling to the Unitarians, "Give us of your oil, for our lamps have gone out!"

THE INTERNATIONAL CONGRESS OF THE HISTORY OF RELIGIONS,

PARIS, SEPTEMBER 3—9, 1900.

BY PROF. JEAN RÉVILLE.

THE Universal Exposition at Paris is to be accompanied by a large number of congresses devoted to the interests of all the various sciences and industries which modern civilisation has produced. From milling to philosophy every branch of human endeavor will here be passed in review. Just as the exhibition of the products of industry is to be so arranged that the visitor shall be able to follow the actual development of each species of production or manufacture from its crudest beginnings to its most recent stage of perfection, so provisions have also been made for the installation of a series of scientific and technical reunions for enabling the specialists of these branches of human activity to exhibit to the world in epitomised form the sum-total of the knowledge and skill which has been accumulated in their particular domains. Side by side with the mechanical arts and industries of the nineteenth century now just drawing to a close, will be exhibited also the progress that has been accomplished by the mind in the various spheres of intellectual and spiritual endeavor proper, at the moment when humanity is entering upon the twentieth century.

Now it was indispensable that the studies concerned with the subject of religion should also be represented in this encyclopædic exhibit. Religion has played too momentous a rôle in the life of humanity and has always exerted too powerful an influence upon human society to be passed over in silence. But on the one hand religion is not an affair readily admitting of exhibition, and on the other hand the rules of the Exposition formally excluded everything that savored in the slightest of politics or creed. A number

of notable representatives of French theology and religious philosophy had long contemplated the convening at Paris in 1900 of a parliament of religions similar to that which was held with such great success and *éclat* at the World's Exposition at Chicago; and since the year 1896, when the Rev. John Henry Barrows was passing through Paris, several meetings have been held with this purpose in view. But no such convention made up of representatives of all the churches and religious confessions was ever admitted among the official congresses of the Exposition.

Doubtless the promoters of this project would enthusiastically have accepted the alternative plan of dispensing altogether with the official sanction of the Exposition and of organising their religious congresses upon an entirely independent footing; but a second and far more formidable obstacle definitively frustrated their good intentions on this point. It was the formal refusal of the Catholic church to take any part whatever in a conference of such a character. This was the really deciding factor. In a country like France where the great majority of the people are, at least in name, professing Roman Catholics, a parliament of religions in which no authorised representatives of Catholicism took part would be doomed to failure from the start. It is a remarkable fact that the same Catholic church which, in America, consented to take a leading part in the Parliament of Religions at Chicago, should obstinately refuse to do so in Europe, where it is in no wise constrained to make the same concessions to the spirit of democracy.

Seeing that a second Parliament of Religions was altogether out of the question at Paris in 1900, the scholars who were occupied more particularly with the scientific investigation of religion believed that it was incumbent upon them to assure to religious studies their rightful place in the great concert of congresses of the Universal Exposition, by providing for the meeting of an International Congress of the History of Religions, in which the problem of the historical values of the different past and present religions should be attacked from its scientific side, and in which a special effort should be made to make them thoroughly understood, to clear up their origins, to elucidate the obscure points of their history, and to review their internal evolution as well as the development of their relations with civilisation in general. And after all, is not this the characteristically modern method (that is to say, the scientific method) of reaching an adequate appreciation of the different religions, namely, to study them by the same method of critical observation which we employ for reaching an objective knowledge of

any of the other manifestations of the spiritual activity of humanity? Is not the science of *religions* the real modern theology, and that destined to take the place of the ancient theology, which was limited to Judaism and Christianity and founded upon the supernatural? Has it not been its good fortune to make more and more important contributions every day to our knowledge of past humanity, and to throw a light of steadily increasing brilliancy upon moral and social problems?

These forcible considerations did not fail to carry weight with the General Committee empowered to institute the congresses of the Universal Exposition; and the professors of the Department of Religious Sciences in the *École des Hautes Études* at the Sorbonne were accordingly authorised to form a committee of organisation for an International Congress of the History of Religions under the presidency of M. Albert Réville, professor of the history of religions in the *Collège de France*. They soon obtained the concurrence of a large number of prominent persons of the Parisian scientific world, without distinction of religious creed. We confine ourselves to mentioning the names of M. Maspero, the celebrated Egyptologist; M. Oppert, the authority on Assyriology; M. Philippe Berger, the successor of Renan at the *Collège de France*; M. Sabatier, Dean of the Faculty of Protestant Theology in Paris; M. Carra de Vaux, professor in the Catholic Institute of Paris; M. Anatole Leroy-Beaulieu, member of the Institute; M. Guimet, founder of the Museum of Religion in Paris; M. Senart, the celebrated Indianist; M. Michel Bréal, etc., etc.

To bring order into the labors of the Congress, the committee has established eight sections for the carrying out of its work: (1) Religions of non-civilised peoples and of pre-Columbian America; (2) Religions of the extreme Orient (China, Japan, Indo-China, the Mongols and the Finns); (3) Religions of Egypt; (4) Semitic religions (Assyro-Chaldæan, Judaism, Islamism); (5) Religions of India and of Persia; (6) Religions of Greece and Rome; (7) Religions of the Germans, the Celts and the Slavs, and the Pre-historical Archæology of Europe; (8) History of Christianity. Which last section, by reason of its importance, is to be divided into three sub-sections, viz., (a) The Early Centuries, (b) The Middle Ages, and (c) Modern Times.

It has been decided that the Congress shall meet at Paris from the third to the ninth of September, 1900. The membership fee has been fixed at ten francs. Applications should be sent to the secretaries, M. Jean Réville and M. Léon Marillier, at the Sorbonne,

Paris; and drafts should be made payable to M. Philippe Berger, treasurer, 3 Quai Voltaire, Paris.

According to the rules of the Exposition, the committee of organisation could be composed only of French citizens; but inasmuch as the question was of an *international* congress to which interested persons in all countries had been courteously invited, and where the English, German, Italian and Latin languages were admitted on the same footing with the French, the committee took pains to appeal to the co-operation of foreign scholars by requesting them to accept the honorary title of "Correspondents of the Congress." MM. Tiele, Chantepie de la Saussaye, Krumbacher, Oldenberg, Max Müller, Guidi, Goblet d'Alviella, Cust, etc., etc., have graciously promised their co-operation and also commended the step taken by their colleagues in Paris. In the United States the committee were fortunate in procuring the support of the Hon. C. C. Bonney and Dr. John Henry Barrows, Dr. Goodspeed and Dr. Paul Carus, that is to say, of the organisers and continuers of the World's Parliament of Religions in Chicago. In addition, Drs. Toy, Haupt, Harris (Commissioner of the Bureau of Education of the United States), Harper, Lanman, Jackson, Jastrow, and Gottheil have responded favorably to the appeal, promising either to take part personally in its meetings, or to promote the interests of the Congress among their compatriots.

Nearly two hundred scholars or students of religious history have already become members, but this number will certainly be more than doubled before the month of September. The facilities of transportation, the reduction of the price of tickets, which has been especially arranged for by the Exposition, will doubtless encourage many persons to make the voyage to Paris to see the Exposition and to take part in the Congresses. Some seem to fear that, in view of the enormous influx of visitors, difficulty will be experienced in finding accommodations for a stay in Paris. But that danger is to be less feared in Paris than in any other place. In a city which with its immediate suburbs numbers three millions of inhabitants, and which normally receives more visiting strangers than any other city in the world, there exist resources which are almost unlimited for the quartering of transitory guests. Besides, if notified in advance, the committee of organisation of the Congress obligates itself to procure accommodations for those who cannot find them themselves.

The desire of the organisers of the Congress is that the initiative taken by them in connexion with the present Exposition of

1900 shall be the point of departure of a regular series of congresses of the same character to meet every three, four, or five years for the purpose of giving to the general history of religions the stimulus necessary to assure to it for all time the place which it should rightfully occupy in our modern instruction ; of aiding in some way to disseminate the results of its researches over wider and wider spheres of influence, and to give to scholars of all nationalities who have devoted their time and powers to labors in this field an opportunity of becoming acquainted with one another and of consolidating their common studies. This will be the principal service of the Congress.

In the United States, where the history of religions has taken in late years so happy a development, the committee of the Congress hopes to meet with favorable recognition. It appeals to the co-operation of all those who appreciate the utility, not only the scientific but also the moral utility, of the diffusion of the science of religions, and asks that they accord to their friends in Europe the support of their activity and their sympathy. We hope that many of them will be able to take an active part in the Congress, and that those even who are prevented from visiting Europe at this time will at least be able to offer their moral collaboration by inscribing their names as members.

JOHN BERNARD STALLO.

AMERICAN CITIZEN, JURIST, AND PHILOSOPHER.

BY THOMAS J. MCCORMACK.

ON January sixth last there died at Florence, Italy, in the person of John Bernard Stallo, a distinctive type of our best American citizen,—a man who despite signal achievements in professional and public life and in the domain of philosophic thought has, either from his own inherent modesty or from our inveterate national lack of appreciation for such talents, not yet attained to the reputation which is his due.

John Bernard Stallo passed the years of his early manhood, as well as those of his maturest activity, in America; and we may, without disparaging in the least either the impulse which his sound youthful education in Germany gave him, or the extraordinary advantages which his acquaintance with the German language and with German intellectual traditions lent him over most of his contemporaries, still characterise him as essentially a product of American conditions. At seventeen, a poor teacher in a private school in Cincinnati; at twenty-one, professor of mathematics, physics and chemistry in St. John's College, Fordham; at twenty-four a member of the bar of Cincinnati, at thirty-one a Judge of the Court of Common Pleas of Hamilton County, Ohio: he successively rose to positions of increasing eminence in his city and country, culminating in 1885 in his appointment by President Cleveland as United States Minister to Italy. In addition to this, he is the author of the profoundest and most original work in the philosophy of science that has appeared in this country,—a work which is on a par with anything that has been produced in Europe, and which showed a firm and independent grasp of what are now acknowledged principles of scientific criticism at a time when these were not in the possession of the majority of scientists. And all this varied activity

is rounded off by the picture of the life of a man of sterling culture wielding an unobtrusive but persistent influence for the social and intellectual good of the community of which he was a part, and which has since borne a distinctive impress of that influence.

John B. Stallo was born in Sierhausen, Oldenburg, Germany on March 16, 1823. He came of sturdy Frisian stock, which had produced a long line of schoolmasters, and himself received at Vechta his official education for that career. He was precocious and at sixteen was sufficiently conversant with elementary mathematics, the ancient and the modern languages, to fit him for entrance into the University. Waiving this career, he emigrated in 1839 to America, and settled in Cincinnati, where he found occupation as a teacher and published the first offspring of his genius in the shape of a spelling and reading book of the German language, afterwards characterised by him as his most brilliant literary success. We soon find him at St. John's College, Fordham, where he first was a teacher of German and the classics and in 1843 was made professor of mathematics, physics, and chemistry, a position which he held until 1847, when he returned to Cincinnati and studied law, being admitted to the bar in 1849.

It was in this period, by his comprehensive studies in mathematics and the sciences, that he laid the foundation of his philosophical career, to which he remained true amid all the preoccupations of his professional life. Even here, through the unaided insight of his natural genius, it was the works of the great masters only to which his energies were directed, and to this rare economy and selective judgment which he exercised in all his labors, are in our opinion due not only the great range and variety of his humanistic accomplishments but also the historical breadth and critical acumen which so eminently distinguished his philosophical researches.

His first philosophical work, which, like Hume, he subsequently repudiated as "one of the unavoidable disorders of intellectual infancy," and which will doubtless also have the same fate as Hume's philosophical firstling, of being regarded by subsequent historians of American philosophy as the true and original expression of his views, was a book entitled *General Principles of the Philosophy of Nature with an Outline of its Recent Developments among the Germans, embracing the Philosophical Systems of Schelling & Hegel, and Oken's System of Nature*, published in Boston in 1848. Be the merit of this work what it may, it did not altogether fail of an influence upon American thought; there were here recorded a digest of the views of many German philosophers who were at

that time a sealed book to most American readers, and even that part of it of which its author by his own implicit expression was "ashamed," may have possessed an import of which he was totally unaware. To his great philosophical work, *The Concepts and Theories of Modern Physics*, the fruit of a life-time of thought, we shall refer in more detail at the end of this notice.

We now turn to his career as a citizen, professional man, and publicist, proper, which exhibits traits that are more likely to endear him to our national consciousness. His life in this regard has been too well characterised by the late Ex-Governor Körner, in his book *The German Element in America*, to require much supererogatory comment on our part. Ex Governor Körner, too, was a signal embodiment of German traditions and European culture in the West; Judge Stallo and he were congenial spirits; both were chosen as types of our so-called German-American citizens for representing America at foreign Courts; and for an appreciation of this phase of Stallo's career, we can do no better than to call the attention of our readers to Körner's work, which is distinguished alike by its humanitarian breadth and by its literary qualities. "Judge" Stallo, for such he became in 1853, enjoyed for upwards of thirty years a very lucrative law-practice in Cincinnati, and his home was one of the social, intellectual and artistic centers of that city. He was a lover of music and belles-lettres, and a wide reader of history and political science. He rarely entered the arena of practical politics, but in great national and local crises his pen and his voice were always enlisted in the service of high, liberal, and progressive ideals. It was thus in 1865, thus in 1876, in 1880, and in 1892; and thus with the tariff, civil service, and political reform generally, on many other occasions. We have in his latest work, *Reden, Abhandlungen und Briefe* (New York: E. Steiger & Co., 1893) a charming picture of this side of his career.

The essay on Thomas Jefferson in this volume breathes an air of unwavering confidence in the future of our country, at a time when many were despondent (1855); and it also exhibits a grasp and appreciation of our political institutions that was, and even still is, rare. The same breadth and profundity marked his utterances on such questions as the Future of the English Language in America, the Reading of the Bible in the Public Schools, Know-Nothingism in the Public Schools, and Instruction in German in Public Schools. On all these burning issues, Stallo appealed to the reason of his hearers, not to their prejudices, and so lifted his discussion to the planes of national dignity and the intrinsic

forcefulness of truth. So confident was he of the cultural mission of German thought and sentiment in the United States that the steadily increasing predominance of the English language never so much as even threatened that mission in his estimation. He referred to the famous utterance, "I had rather make a nation's songs than its laws;" and added, "Whatever language our children shall speak in the centuries to come, they and the descendants of the Anglo-Americans shall sing the melodies of our fathers, the light of German science shall beam from their eyes, and the glow of German sentiment incarnadine their cheeks The lyre is a more glorious symbol of national happiness than the steam-engine and it is as magnificent a calling to keep the hearts of a free people responsive to the quickening lessons of genuine poetry as it is to gather and to hoard the golden fruits of industry."

This breadth and independence of view marked all his actions and was the source of his great influence. He was never led by fixed social opinions, and changed his politics several times in life, in conformity with his own purely rational convictions. He was the champion of freedom of thought and action in all its forms, and his main juridic laurels were won in connexion with cases where liberal issues were concerned. This trait, says a writer in the *Popular Science Monthly* for February 1889, "was strikingly manifested in his presiding over a public meeting addressed by Wendell Phillips, when the orator was made a mark for missiles, and Judge Stallo stood by his side and bore the brunt of the assault with him. This was in 1862, when Mr. Phillips was invited to speak in Cincinnati in favor of emancipation. A bitter prejudice existed against him because he had been a disunionist. Judge Stallo had been invited to introduce him, but declined, because, his sympathies never having been with Mr. Phillips, he was not the proper man to perform that office. But when he was informed that other men whom he had mentioned as more suitable had declined, because they were afraid of a mob, he consented, saying, 'That is enough, gentlemen—I will be there.' Mr. Phillips, after being introduced, was at once assailed with a shower of disagreeable and dangerous missiles. One of them hit Judge Stallo. 'During the turmoil and uproar,' said Judge Stallo, telling the story several years afterward, 'Mrs. Stallo, with Mrs. Schneider, sat behind a fellow who had risen and aimed a big stone at the speaker. As he threw his hand back to fire the stone, Mrs. Stallo, who entered heart and soul into the spirit of the hour, and had no thought but to stand by her friends in the stormy crisis, reached over and hit the fellow's wrist

a hard blow, making him drop the stone and howl with pain. He looked around to see his assailant, and Mrs. Stallo was up and ready for him, but gentlemen hastened to her side, and the fellow moved away.'"

Judge Stallo took a pronounced stand in the political movement of 1884, and was sent in the following year as United States Minister to the Court of Rome. After the expiration of his official term, he took up his residence in Florence. Through the kindness of his daughter Miss Hulda Stallo we are enabled to present to our readers photographs of his villa and of the library in which he pur-



VILLA ROMANA. JUDGE STALLO'S RESIDENCE IN FLORENCE, ITALY.

sued his studies in his declining years. Surrounded with the art, the learning, and the culture, which had been the dream of his youth, and in correspondence with eminent thinkers of Europe on topics that had formed the subject of his philosophical contemplations, his life drew fittingly to a close in an ideal atmosphere and with ideal tasks done. He left a widow and two children, Miss Hulda Stallo, of Florence, Italy, and Mr. Edmund K. Stallo, of Cincinnati. His great work *The Concepts and Theories of Modern Physics*¹ constitutes his most enduring title to fame and we shall therefore devote a few brief paragraphs to its characterisation.

¹ Second edition, New York, Appleton and Co., 1884.

Judge Stallo did not claim for his work the significance of "a new theory of the universe, a novel system of philosophy." "I



LIBRARY OF JUDGE STALLO IN THE VILLA ROMANA.

have undertaken," he says, "not to solve all or any of the problems of cognition, but simply to show that some of them are in need of being stated anew so as to be rationalised, if not deepened

The utter anarchy which notoriously prevails in the discussion of ultimate scientific questions, so called, indicates that a determination of the proper attitude of scientific inquiry toward its objects is the most pressing intellectual need of our time, as it is an indispensable prerequisite of real intellectual progress at all times."

The book is thus on the face of it a contribution to epistemology, or the theory of cognition, as based upon a careful study of the physical sciences. It controverts the belief that there has been a total breach of continuity in the philosophy of science, from mediæval times to the present day, that "modern physical science has made its escape from the cloudy regions of metaphysical speculation, discarded its methods, and emancipated itself from the control of its fundamental assumptions." On the contrary, it holds that "the prevailing misconceptions in regard to the true logical and psychological premises of science are prolific of errors, whose reaction upon the character and tendencies of modern thought becomes more apparent from day to day."

But while a book of philosophy, it is not a book of "metaphysics," in the old sense. Indeed, "its tendency is throughout to eliminate from science its latent metaphysical elements, to *foster* and not to *repress* the spirit of experimental investigation, and to accredit instead of discrediting the great endeavor of scientific research to gain a sure foothold on solid empirical ground, where the real data of experience may be reproduced without ontological prepossessions."

It begins with an attack upon that conception of modern physical science which "aims at a mechanical interpretation of the universe," and considers successively both the history and the principles of the mechanical philosophy in all the forms of its expression: the doctrines of mass, inertia, energy, the atomic constitution of matter, the kinetic theory of gases, etc., interpolates several chapters on the development of a theory of knowledge; and ends with the critical application of the principles of that theory to the metaphysical assumptions involved in the mechanical philosophy and the mathematics of the metageometricians.

One is astonished in reading this work, not only that so vast a range of scientific and philosophical knowledge could be covered by a man actively and continuously engaged in the profession of the law, but also that so acute and original critical powers could be developed in an atmosphere so uncongenial to this species of inquiries. While Judge Stallo's book is well known in America, it has not had the notice it deserves in Europe. It has much in com-

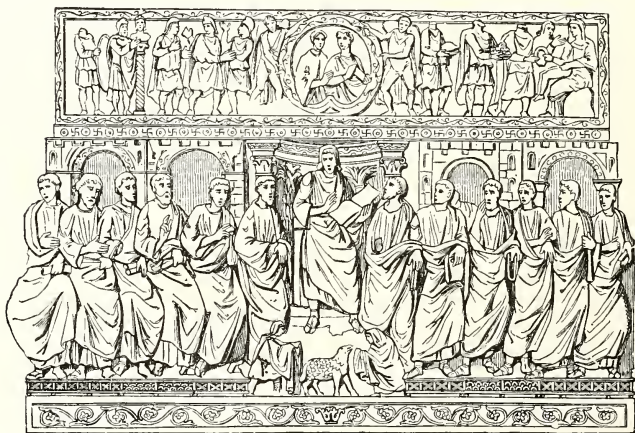
mon with recent developments of thought there, and the coincidences of its general points of view with Professor Mach's philosophy are especially remarkable, as each system was developed independently of the other, and each thus offers a welcome corroboration of the other. It is, in fine, safe to say not only that the influence of Stallo's work will be a permanent one, but that it will also steadily increase, despite the fact that many of the doctrines it attacks are being gradually abandoned.

Attention should be called, in closing, to the philosophical essays which Judge Stallo wrote in German, and which have been published in his collection of *Reden, Abhandlungen*, etc., mentioned above. These essays, which treat of such subjects as *Materialism* and *The Fundamental Notions of Physical Science*, are marked by the same qualities of thought as the author's principal work, but they are written in a lighter vein and are pervaded with a humor that will ensure them a more permanent place in the affections of the German readers of America, and so render accessible to them also the more important side of the intellectual character of this unique figure of our national life.

SIGNETS, BADGES, AND MEDALS.

BY THE EDITOR.

CHRISTIANITY did not take possession of the hearts of the people at once and exclusively. It was but one new religion among several others that had been imported from the Orient,



THE SARCOPHAGUS IN ST. AMBROGIO, MILANO.¹

Christ with the twelve Apostles. While the cross is absent, swastikas and solar discs are employed as ornaments.

commanding the general interest and rousing the hopes of seekers after truth. Therefore we must not be surprised to find many Christian sarcophagi and graves in the catacombs decked with symbols that would have been spurned in later centuries as Pagan.

¹ From Lübke's *Kunstgesch.*, p. 266.

Many of the beautiful intaglios and signets that have been found all over the Roman Empire, belong to the second and third century of our era, and it seems that they served partly as amulets, partly as signs of identification, or tickets of admission to the celebration of mysteries. A greater number of them show symbols of the cult of Abraxas, others of Mithras; many of them are Gnostic and some are Christian.

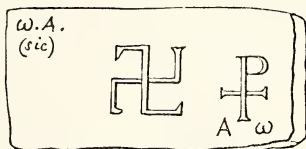
The Christians were upon the whole opposed to pictorial representations of any kind, but considering the wide-spread custom, the churchfathers yielded to the demand, allowing, however, only a limited number of symbols which appealed to Christian sentiments.

Clement of Alexandria, speaking of worldly ornaments, says that "there are circumstances in which the strictness [of Christian discipline] may be relaxed." He says:

"If it is necessary for us, while engaged in public business, or discharging other avocations in the country, and often away from our wives, to seal anything for the sake of safety, He (the Logos) allows us a signet for this purpose only. Other finger-rings are to be cast off, since, according to the Scripture, "instruction is a golden ornament for a wise man."²

"And let our seals be either a dove, or a fish, or a ship scudding before the wind, or a musical lyre, which Polycrates used, or a ship's anchor, which Seleucus got engraved as a device; and if there be one fishing, he will remember the apostle, and the children drawn out of the water. For we are not to delineate the faces of idols, we who are prohibited to cleave to them; nor a sword, nor a bow, following as we do, peace; nor drinking-cups, being temperate."

Other symbols frequently used in the catacombs by Christians



CHRISTIAN SYMBOLS IN THE CALLIXTINE CATACOMBS.¹

(The Christogram, the Swastika, and the ΑΩ, the latter in two forms.)



THE GRAVE DIGGER DIOGENES. NO CROSS BUT SWASTIKAS.

Picture on his tomb in the catacombs of S. Domitilla. (After Boldetti, reproduced from F. X. Kraus, *Gesch. d. ch. K.*, I., p. 170.)

¹ Smith and Cheetham, *Dict. of Chr. Ant.*, I., p. 497.

² Eccles. xxi. 24.

are palm-branches, the phœnix, the peacock, the crown and the lamp. In addition scenes of martyrdom are depicted. The Christian character of many gems is assured through the monogram of the Initials of Christ (✠), a combination of *Ch* (X) and *R* (P). The name of the owner is frequently added to the symbol.

It is sometimes difficult to determine whether an intaglio is Christian or Pagan, for we must bear in mind that at the beginning



MARTYRDOM
GEM.¹



CHRISTIAN GEM.
With name of
owner. (King).



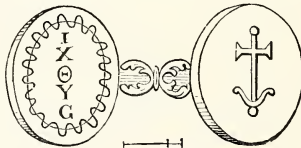
HAND WITH
PALM.
British Museum.

of the Christian era several religious movements took place within the limits of the Roman Empire. The old faith suffered decay everywhere and the new ideas produced a state of mental fermentation which finally led to the destruction of the classical civilisation.

The most powerful movements of the age are the Syrian Gnosticism, the Egyptian Abraxas worship and the Persian Mithras



THE PHOENIX AS A
SYMBOL OF IM-
MORTALITY.²



CHRISTIAN GEM.
IXOYC and anchor (Smith and
Cheetham, p. 714).



ANCHOR AND
DOLPHIN.
British Museum.³

religion. All of them resemble Christianity in almost all essential features, especially in the spirituality of God, the need of salvation from sin and corporeal existence, and the hope of an immortality of

¹ This gem (a Christian New Year's present) represents the death of a martyr. The letters *ANFT* mean *annum novum felicem tibi*. Smith and Cheetham.

² From Münster.

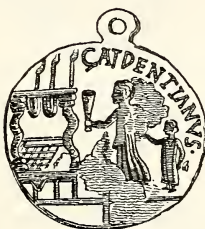
³ The inscription *επιτυχανον* means "succeed!"

the soul in one form or other. It is difficult to distinguish them, for the character of the age is syncretism, a mixture of thought producing everywhere entanglements and identifications of old and



CHRISTIAN GEM.

With name of
owner.

THE GOOD SHEPHERD.¹SHIP GEM.²

CHRISTIAN WORSHIP AND MARTYRDOM.

(A medal reproduced from Kraus, *Gesch. d. Ch. K.*)

SYNCRETISM ON A GEM.³CHRIST STRUGGLING
WITH THE EVIL ONE.⁴

IAΩ GEM (KING).

new deities, of Greek and Eastern conceptions until it becomes impossible to classify them properly.

Perhaps the greatest number of intaglios are Abraxas gems, so called after the inscription which is repeated upon many of them.

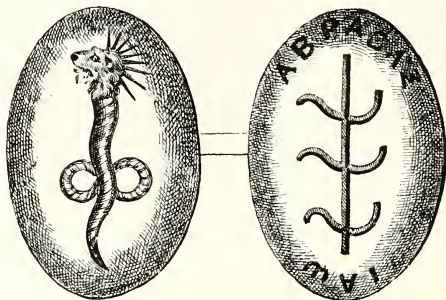
¹ Kraus, *Gesch. d. ch. K.*, p. 94.

² Smith and Cheetham, I., p. 715.

³ In the possession of the Rev. Churchill Babington.

⁴ Didron, *ic.*, II., p. 201.

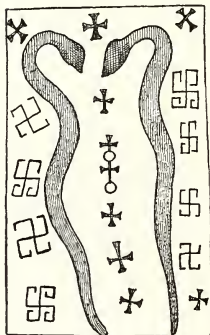
Abraxas is an Egyptian word derived from *abrak* which happens to be mentioned in the Old Testament and means "bow the knee" or "worship."¹ Abraxas is the Adorable One and is the common cognomen of God.



ABRAXAS GEM WITH THE AGATHODÆMON.²

The proper name of God on the Abraxas gems is Iao, which is always written ΙΑΩ in exactly the same form of letters as the Christian ΑΩ, the A and the O of the Revelation of St. John the Divine, which is so frequently represented in the catacombs.

The Abraxas gems bear symbolic representations of Iao Abraxas, in the shape of a cock-headed man with serpent feet, in one hand a shield in the other a whip. We must remember that the cock was the sacred animal of Æsculapius, the God of healing, and Socrates requested his friends to sacrifice a cock to Æsculapius after his death because his soul was now freed from the disease of materiality due to its contamination by the body.



SLAB WITH SERAPHIM.

The serpent is regarded as a sacred animal in the Orient. The seraphim³ of the Hebrew are the guardian spirits that stand in the presence of Yahveh. The Syrian Gnostics speak of the serpent as the symbol of wisdom, and in Egypt winged serpents are frequently mentioned in religious texts. The concurrence of so many similar traditions led to the idea rep-

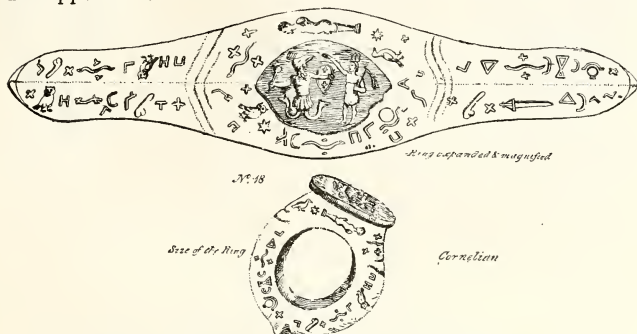
¹ Gen. xli. 43.

² Walsh, *op. cit.*, No. 2.

³ Seraphim is the plural of Seraph which means "snake."

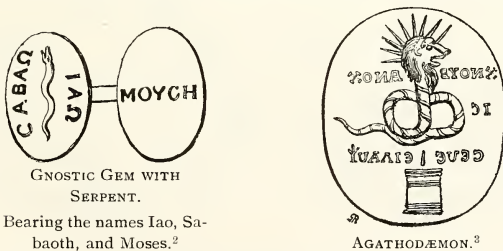
representing the Agathodæmon, the deity of goodness, in the shape of a serpent with a lion's head.

The Agathodæmon played an important part in the Abraxas mysteries and is frequently represented above the sacred cysta from which the priest at the celebration of festivals made his sudden appearance.



A SEALING-RING OF IAO WORSHIP WITH Gnostic SYMBOLS OF DOUBTFUL SIGNIFICANCE.¹

The symbol of the Agathodæmon is a treble cross whose transom beams are gently curved. Treble crosses are quite frequent in Christian art, but there is no means of finding out whether there is



any connexion between the Christian treble cross and the emblem of the Egyptian Agathodæmon.

¹ R. Walsh, *Anc. Medals, Coins, and Gems*, p. 69. "This remarkable ring was brought from Egypt by a soldier and is now in the possession of Dr. Adam Clarke. It shows in the stone which is a cornelian, the god Abraxas, and another figure which I take to be his priest in the attitude of worship, extending in his right hand either a sacrificial cake or some other object for the sake of consecration. In his left hand he wears a flagellum, on his head a crown. The symbols that cover the ring itself are emblems of reproduction (priapi and phalli), serpents between equilateral crosses, owls, solar disks, stars, triangles, and signs of doubtful significance."

² Walsh, No. 4.

³ From C. W. King.

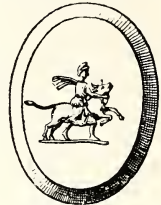
Almost as frequent as the Abraxas gems are the intaglios, signets, and badges used by the worshippers of Mithras. There is an



The sun-god holding in his hand the globe on which the four quarters are indicated.¹



Mithras slaying the bull. On the reverse Cupid and Psyche (broken).²

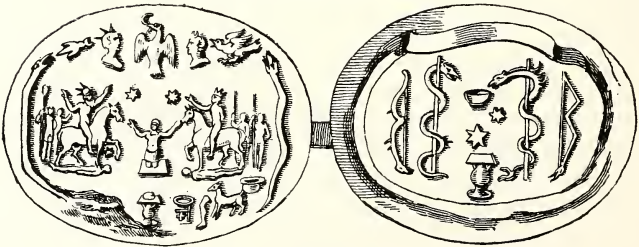


Mithras leading off the bull. Reverse of the gem with the sun-god

MITHRAISTIC GEMS. (Green jasper.)



(After Chiflet, reproduced from C. W. King.)



(Reproduced from Walsh.)

MITHRAISTIC CAMEOS.

Showing Mithras born from the rocks between the Dioscuri, surrounded by Mithraistic symbols, among them the cup and bread of the Eucharist.

unlimited variety of them extant, and yet they all bear a certain resemblance which renders it easy to recognise them.

¹ The inscription reads ABAANIΘIINAABA, and underneath TVΞEVI.

² The exergue reads: CNEIXAPOIIAHΞ, and the bevelled margin NBAΦENEMOY NOCIA-APIKPIΦAAEYE, underneath IOE. (After Cumont.)

An interesting intaglio of the Mithras worship shows Mithras standing in the center between the two Dioscuri, both holding a kind of trident (perhaps a symbol of life and light) one having the prongs up, the other down. Above Mithras, the raven, the moon, Helios as the sun-god, and perhaps Hermes. Two serpents serve as supporters in a coat of arms on either side. Underneath Mithraic symbols, among which the table with the sacred bread and the cup of the Eucharist are prominently visible.

A fine intaglio of probably Gnostic significance exhibits the trinity of strength, love and wisdom symbolised in a lion, a dove with the olive-branch on a sheaf, and a serpent. The dove with the olive-branch is the emblem of Astarte, and the sheaf of wheat indicates the fulness of life and reproduction.

Mr. Clark has discovered in Larneca, Cyprus, a number of gems representing doves with olive-branches. They are accom-



A SHIP SYMBOLISING
THE CHURCH.



A CHRISTIAN GEM WITH
SERPENT.



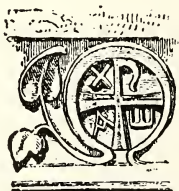
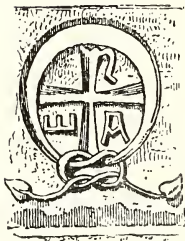
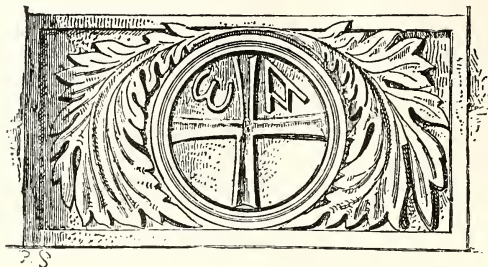
A GNOSTIC GEM.

panied by illegible Phœnician characters (*Travels*, II, p. 326). The same device appears on coins of the city of Eryx, Sicily. Bishop Münster¹ is opposed to treating them as Christian; the birds may be ravens or some other species. Not even the olive-branch is a sure sign of their Christian origin. "It is certain," says the Bishop, "that many gems with doves, which exist in great numbers and are all believed to be Christian, were designed to serve as signets for worshippers of the Queen of Heaven."

The serpent, that important emblem of Syrian Gnostics, the Serapis cult and Mithras worship, occurs in Christian symbols only as the representative of evil, and yet there are Christian gems where the snake is represented in attitudes which exclude the theory of its being a messenger of Satan. A Christian gem, showing the Chrisma T cross between the A and ω , represents the snake between

¹ Münster, *Sinnbilder*, p. 109.

two doves. Observe that the snake is not crushed by the cross, as we find it in later Christian devices, but is in a peaceful communion with the doves. We must add that possibly the snake here takes



THE Α AND Ω IN THE CHRISTOGRAM ON SYRIAN HOUSE-FRONTS.

the place of the fish, as the stone-cutter for artistic reasons may have preferred a twining serpent to the unaccommodating fish.



MEDAL STRUCK IN HONOR OF SERAPIS AND ANUBIS.¹

Martyr scenes are frequently represented on medals, but the probability is that all productions of this class belong to a later period.

¹ Walsh, No. 28.

Christians loved to represent Christ as a fish on the rood, but even here Pagan influences made themselves felt. The fish is one of the most ancient religious symbols, dating back to the age of the old Akkadians and Assyrians; but Christians adopted it on account of the word ΙΧΘΥΣ. meaning fish in Greek, the letters of which form the acrostic Ἰησοῦς Χριστὸς Θεοῦ Υἱὸς Σωτὴρ, i. e., Jesus Christ God's Son, the Saviour. But the Christian stone-cutters bearing in mind the Greek myth of the dolphin who saved Arion frequently replaced the fish by a dolphin. Indeed there are instances in which the serpent takes the place of the fish.

The idea of seeing in the fish a symbol of Christ is an after-thought which came to Christians when they found the fish symbolising the idea of God the Saviour in the mythologies of their gentile neighbors.

The ancient Babylonians believed in a Triad of Gods, Anu, Bel and Ea. Anu is God the Highest and Greatest, but Bel and Ea are treated as his equals. Anu's symbol is the equilateral cross bearing a remarkable resemblance to its Maltese form. While Anu is the Creator in general, Bel is the deity through whose exertion the world is shaped. He struggles with Tiamat, gives shape to heaven and earth, creates man from his own head and is the saviour from evil. Ea is the Babylonian Okeanos. He is the Lord of the waters and of profundity. He is wise and just. He makes the law and saves the Babylonian Noah from the deluge by teaching him how to build a vessel. He is praised in a hymn as riding, like the Egyptian Ra, in the sunboat over the aerial ocean of heaven. He is the protector of art and science, the giver of oracles, the adviser in emergency, the savior who in the beginning of civilisation came out from the deep, clothed in the skin of a fish, to teach people law and order.²

There can scarcely be any doubt that Ea is the Philistine Dagon whose worship is repeatedly mentioned in the Old Testament.³



THE GOD EA CLOTHED IN
THE SKIN OF A FISH.¹

¹ Assyrian bas-relief in the British Museum.

² Tiele, *Bab. Ass. Gesch.*, pp. 516-523.

³ 1 Sam. v, 2 ff. 1 Chron. x, 10. Judges xvi, 23. 1 Marc. x, 83 ff. xi, 4.

To the Egyptians the fish was also a sacred symbol, being a symbol of Hat Hor, the holy mother of Har-pa-Khrad, God the child, the rejuvenated son, the revenger and saviour.

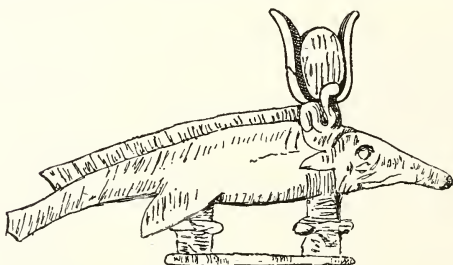
The dolphin was sacred to Dionysos, and as Christ was in many respects identified with this deity, the suffering, dying and resurrected God of the vine, it is but natural that Christian fishes should be frequently pictured as dolphins.

Tertullian adopts the fish as the chief symbol of Christ and speaks of Christians as little fishes. Thinking of the regeneration through baptism, he says :

"But we fishlets are born, after our fish Jesus Christ, in the water."

And Clement of Alexandria sings in his famous hymn :

"Fisherman of mortals of the ransomed heirs,
Who from the hostile floods with sweet life the pure fishes catchest."



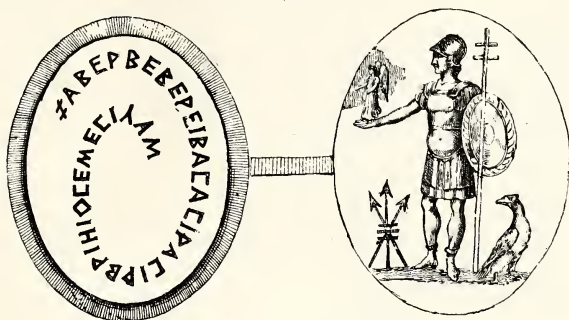
THE OXYRHYNCOUS FISH, THE SACRED ANIMAL OF HAT-HOR.
From a Bronze in the Louvre.

There are many other allusions in Christian literature to the fish¹ and its form is represented everywhere in the catacombs and on Christian gems.

Tot (or Thoth) the god of the scribes in Egypt was regarded as the medium of divine revelation and so he stood for science as well as salvation and held quite a similar place to the Christian logos. As the messenger of God he was identified by the Greeks with Hermes, who now was regarded as the manifestation of his father Zeus and as the saviour from death. The old Greek idea of Hermes as the leader of souls through the gates of death added strength to

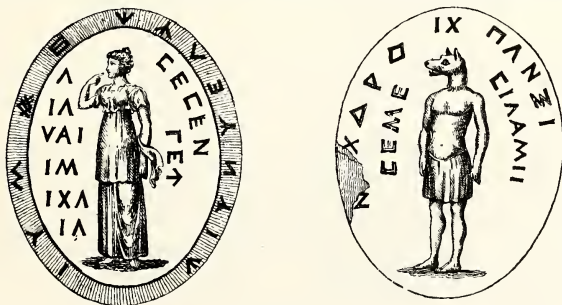
¹ An acrostic on ΙΧΘΥΣ in which every successive line begins with the words Jesus Christ, God's son, the Saviour, and ends in "σταυρός cross," is preserved by Galæus in the Sybilline songs. Another Greek poem of a similar kind which was written on a tomb-stone and was discovered in 1839 is quoted by the Rev. Samuel Cheetham in his *Dictionary of Christian Antiquities*, Vol. I, p. 806.

the new conception, and the Hermes staff, originally a combination of the solar disc and the lunar crescent γ , but misinterpreted in Greek art as two coiled serpents, became a symbol of the God who has the power of resurrecting the dead.



A HERMES-ZEUS WITH A DOUBLE CROSS.¹

Thoth-Hermes is called the thrice greatest and the shepherd of men, which latter word (*ποιμὴν ἀνδρῶν*) has been abbreviated into



ANUBIS GEM.²

Poimander or Pymander and the religion of his followers is described in a remarkable little book which may contain portions of great antiquity.³

¹From Walsh, No. 12. The inscription reads: ΖΑΒΕΡΒΕΒΕΡΕΙΒΑCΑCΙPACIPBPΠHΙΘCE-MECIAAM.

²From Walsh, No. 9. Anubis is the jackal or dog-headed deity. He, like Thoth, is identified with Hermes. The female figure on the reverse indicates silence. The inscriptions are a mixture of Greek and other languages.

³Extracts from Hermes Trismegistos will be published in a separate article on the subject.

Serapis, which is a Hellenised form of Osiris-Apis, was a religion which in many respects resembled Christianity. Their sacred symbol was the cross, as we know through Christian authors,¹ and Emperor Adrian (no mean authority in such matters) speaks of Serapis worshippers as Christians, saying that those who consecrated themselves to Serapis called themselves "bishops of Christ." Even if a local blending of Christianity with the Serapis cult in Egypt had not taken place, we must recognise that the monkish institutions of the Serapean temples were an exact prototype of the Christian monasteries which originated in Egypt and flourished there better than anywhere else.

The Serapis cult was a reformation of the old Egyptian Osiris worship, introduced by Ptolemy Soter for the purpose of adapting the old traditions of Egypt to the Hellenic culture of Alexandria.



THE HERMES STAFF
ON A GEM.
(From King.)



HERMES RESUR-
RECTING THE
DEAD (KING).

The double cross (⌘) is a symbol of unknown significance, but it occurs in Greek Paganism as well as in Christianity. Christians as a rule interpret the second transverse beam to represent the board bearing the inscription. The third transverse line in a treble cross (⌘) is supposed to represent either the seating plug (*sedile*) or the foot-rest (*suppedaneum*).

The most curious specimens of ancient intaglios are those of a mixed nature, exhibiting partly the erratic disposition of their owners and partly their aspiration for universality. We reproduce (p. 287) a curious specimen of this kind—a combination of several symbolical animals. Three heads are attached to the feet of a cock, and the inscription IXΘYC (perhaps added by a later hand) proves the owner's attachment to Christianity. The human head, apparently the homely face of the stump-nosed and bald-headed Socrates, seems to stand for Greek philosophy. The ram indicates

¹ See Socrates, *Eccl. Hist.*, 5, 17, which report is repeated by Sozomenes.

the Egyptian Amon, the horse reminds us of the team of the sun-god, and is probably the emblem of either Helios or Mithras. The fish in the left corner is Christian ; but the leaping hare to the right side is the symbol of the transiency of the world.¹



COIN OF CONSTANTINE WITH LABARUM.



COIN OF GALLA PLACIDIA.



COIN OF LUCINIA EUDOXIA.



COIN OF JUSTINIAN II.

ANTIQUE COINS WITH CHRISTIAN EMBLEMS.

The owner of the gem, the Rev. Churchill Babington (author of the article on gems in Smith and Cheetham's *Dict. of Ch. Ant.*), says :

"A remarkable sard intaglio, in the possession of the writer, may be mentioned as a kind of postscript. The device is a fantastic compound animal, a *gryllus* of the common type, being probably Roman work of the second or third

COIN OF EMPEROR CONSTANTINUS.²

century. Some Christian possessor has written the word *IXΘYC* about it, in order, it would seem, to christianise such a heathen production."

As the worship of the Queen of Heaven, which had been denounced as Pagan in the Old Testament, became re-established in

¹The hare in Buddhist parables stands for the superficial hearer of the word. For the Christian significance of the hare, see Tertullian, *Ad nat.* II, and compare Fr. X. Kraus, *Gesch. der Ch. K.*, I, p. 145.

²This coin is interesting, because the globe, indicating the monarchical pretension to a right to rule over the whole world, is not as yet surmounted by a cross. Walsh, No. 22.

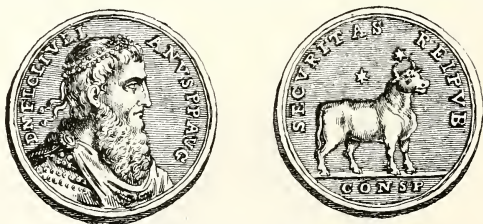
the Church, even to the preservation of the external features of the goddess standing upon the crescent and crowned with a garland of twelve stars,¹ so other ideas and conceptions of pristine religions reappear in the symbolism of gentile Christianity, giving them in an idealised form and after their assimilation to a rigid monotheism, a new lease of life in the territories of the Roman Empire.

So strong was the hatred of idolatry and the fear of imitating Pagan worship among the early Christians that the idea of having,



COIN OF FLAVIUS VALERIUS CONSTANTINUS.²

let alone reverencing, the image of Christ was scouted by the church-fathers, and the first demands for pictures of Christ were felt not in Christian but in Gnostic quarters among men of universalistic tendencies whose philosophical breadth induced them to revere Plato and Socrates, Moses and Christ, and to have their images rendered visible in the same style as the Pagans did with



COIN OF JULIAN THE APOSTATE.³

their gods, by the chisel of the artist. This practice, so severely condemned by the Christians themselves, was gradually accepted by the Church and finally enforced after a bitter strife with the iconoclasts.

¹ So the woman who becomes the mother of the Christ (verse 10) is described in Rev. xii, 1, where we read: "And there appeared a great wonder in heaven; a woman clothed with the sun, and the moon under her feet, and upon her head a crown of twelve stars."

² The Emperor stands on the prow of a ship with a phoenix perched on a globe in his right and a standard exhibiting the labarum in his left hand. Walsh, No. 21.

³ Walsh, No. 27.

The oldest representations of Christ are purely symbolical, picturing him as a lamb, then as Orpheus, the Greek God, who descended into Tartarus and was worshipped in Greece on account of the comforting Orphic mysteries in which obviously the immortality of the soul was taught under the form of one or another allegory. The prophet Jonah is another personality behind whom we must seek an allusion to Christ, because, as Jonah was three days and three nights in the belly of the fish, so Christ remained three days in the jaws of death and was resurrected on the third day.

One of the oldest images of Christ, perhaps the oldest in existence,¹ presumably a product of Gnostic art, is a portrait on ivory which shows above Christ's head the chrisma (✠) in a shape which exhibits its close resemblance to the Egyptian crux ansata (⌘).



GNOSTIC PORTRAIT ON IVORY.

The picture of Christ on medals makes its appearance not before the tenth century of the Christian era; and then very soon the Virgin Mary shared the strange honor. The first man who introduced this innovation was Johannes Zemisches, a zealous adherent of image worship who slew the Emperor Nikephoras Phokas, the



COIN OF EMPEROR CONSTANTINUS MONOMACHUS.

After F. X. Kraus.

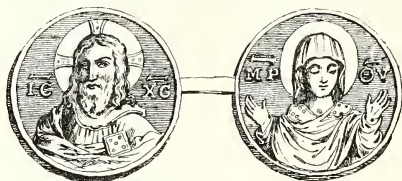
last iconoclast of the Greek church, with his own hand in his palace and was himself saluted emperor by his victorious party in 969. (IC XC.)

The following coin shows Jesus Christ on one side of the medal and Mary (MP ΘΥ), the mother of God on the other side. It is one

¹ So according to De Rossi's authority, see Smith and Cheetham's *Dictionary of Christian Antiquities*, I, p. 876.

of the most beautiful specimens of its kind, for the general degeneration of the Greek Empire led to the decay of all the arts.

We conclude this sketch with a reproduction of a medal that shows the head of Christ with a Hebrew inscription and dates back to the year one (or in Hebrew א). It is of bronze; one copy was found by an Irish peasant in a potato-field near the site of an ancient monastery of Cork, another copy has been obtained from a



CHRIST AND MARY.

On a medal of the tenth century.¹

Polish Jew at Rostock, and the *Illustrirte Zeitung* informs us that a Parisian jeweller apparently ignorant of the fact that the coin is not unknown has lately reproduced a third copy in silver.

The inscription reads on the obverse: א-י-שו and on the reverse:

משיח מלך בא בשלום וארוממו עשרה

Which means, "Messiah, the King, came in peace and as the light of the world he was made to live."



MEDAL OF HEAD OF CHRIST.

With Hebrew inscription.

There is no need of refuting the idea that the medal does not date back to the year one. It is difficult to judge of its age and place of manufacture without seeing the original, but we may fairly grant that for a counterfeit medal which pretends to be what it is not, it is an excellent piece of workmanship.

¹ Walsh, No. 38.

* This ought to be in our opinion an א, Walsh's transcription is full of mistakes.

MISCELLANEOUS.

SHALL WE WELCOME BUDDHIST MISSIONARIES TO AMERICA?

Dr. Carus, the editor of *The Open Court*, in December last chronicled the arrival of two Shinshu priests in San Francisco and quoted them as follows :

" Our intention is to spread the Gospel of Buddha among the Americans . . . revealed by the enlightened Lord Buddha Sakya Muni some 2500 years ago. . . . I have a very strong conviction that Buddhism is naturally destined to become the universal religion in the future, for the reason that there is perhaps no other religion equal to Buddhism that would satisfy the refined minds of the twentieth century. I am most happy to say that I have a very pious belief in the boundless mercy of Amitabha Buddha. My only goal is to attain myself, and help others attain, the *Maha-Nirvana*, where the highest freedom and true happiness may be enjoyed, which our Lord Buddha has revealed for the first time to mankind, suffering constantly from their own passions and ignorance inherited from previous existences."

Dr. Carus thinks Christianity would be greatly benefited if missions from other religions were sent to Christian countries, and sums up the matter in the words : " We heartily welcome the two Buddhist missionaries who have recently arrived in San Francisco."

No one questions that Dr. Carus speaks this welcome in sincerity and of good purpose, but he ought to have known better than to give such a welcome. If he had known this Buddhism as we in Japan know it he would have cut out his tongue rather than bid its priests welcome to America. For what is the Buddhism represented by these priests?

I. *Its Teachings.*

Hear Prof. Max Müller of Oxford : " This Sutra (the *Scriptures* of this sect) sounds to us, no doubt, very different from the original teaching of Buddha. And so it is : ' Repeat the name of Amitabha as often as you can, repeat it particularly in the hour of death, and you will go straight to Sukhavati and be happy,' this is what Japanese Buddhists are asked to believe ; this is what they are told was the teaching of Buddha. Directly opposing the Buddhist doctrine that as a man sows so shall he reap this Sutra says ' No ; not by good works done on earth, but by a mere repetition of the name of Amitabha is an entrance gained into the land of bliss . .

It may be that in a lower stage of civilisation even such teaching has produced some kind of good. But Japan is surely ripe for better things.

"Is it not high time that the millions who live in Japan and profess a faith in Buddha should be told that this doctrine of Amitabha is a *secondary form of Buddhism, a corruption of the pure doctrine of the Royal Prince*, and that if they really mean to be Buddhists, they should return to the words of Buddha, as they are preserved to us in the older Sutras? But these older Sutras are evidently far less considered in Japan than the *degraded and degrading tracts, the silly and mischievous stories of Amitabha* and his paradise of which, I feel convinced, Buddha himself never knew even the names." (Abbreviated and slightly changed in form from *Chips from a German Workshop*, Vol. V., p. 234 ff.—Italics ours).

II. In Practice.

In discussing this point we do not raise the question of the present moral condition of the Japanese people and its cause or causes; nor do we speak of individual lapses, which may occur anywhere. We speak of the priests as a class and especially of those in highest authority, and this we hold to be not unfair. And the circumstances call for plain statements of actual facts:

1. The chief-priest of this sect lives openly in concubinage. He has a large number of these women—somewhere between ten and twenty are figures usually given.

2. The devotees of the sect from the rural districts not infrequently take their daughters to Kyoto and offer them to this chief-priest as a religious act. Such incidents have been again and again reported in the Japanese newspapers, and intelligent Japanese say that in the province of Etchizen and elsewhere where the influence of this sect is most pervasive such an experience on the part of a woman is a recommendation rather than a hindrance to would-be husbands.

3. This chief-priest is not only the possessor of such a household, but over and above this is notoriously profligate. The houses of assignation are declared to be witnesses against him.

4. Two or three years ago a high official of their chief temple tried to marry the daughter of his concubine to the chief-priest and in this connexion the dishonesty and debauchery brought to light was a stench in the nostrils of even the Japanese. One of the Tokyo newspapers published a series of forty articles on the subject.

5. The chief-priest, and the leading officials being men of such lives it is not strange that Buddhist priests have the common reputation of being the most immoral class in the Empire. Records of hospitals which have been examined show that this rumor is not without solid foundation. The registers of the *Yoshiwara* show the same. So notorious is their conduct that government officials have repeatedly lectured them for their laziness and immorality.

6. As is mentioned in this article this sect has missionaries in Honolulu. Passing through that city last spring I was told that the chief patrons of the Buddhist missionaries there were those who traffic in the virtue, in the very life, of their sisters.

I do not assert that there are no priests who are sincere and upright men. There are doubtless those who greatly deplore the evils spoken of and I can believe the report that a few years ago one young reformer declared in the presence of the authorities that unless there was a reform he would cut off his right hand. What I claim is that a sect with such teaching and practice has no message of good to

America and that it is a dangerous sentimentality which bids them welcome to our shores. America, too, is "surely ripe for better things."

AUBURNDALE, MASS., April, 1900.

M. L. GORDON.

EDITORIAL REPLY.

I believe in liberty and free competition. The truth can only come to the front by giving a respectful hearing to every one who believes himself to be in possession of the truth. Even granting the indictments of Japanese Buddhism made by Mr. Gordon, we cannot see that they are worse than those which at one time or other could have been made against Christianity. Further, if the doctrine of the Shinshu is really as silly as represented by Mr. Gordon, I cannot understand how the Buddhist missionaries can be successful in this country. Accordingly they should not be considered dangerous.

Mr. Gordon omits to mention that the invocation of Amitabha's name has merit only according to Shinshu doctrines if made with a pure heart and in faith. It is practically the same as St. Paul's and Luther's doctrine of the saving power of faith. The *sola fide* is as much emphasised in Lutheran pulpits as by the founder of the Shinshu.

The Buddhist missionaries who have arrived from Japan are a kind of Buddhist Protestants. They belong to the Western Shinshu Sect whose leaders and members are known to be liberal as well as earnest in their religion. Their high priest Otani Koye is a noble-minded scholar of untarnished reputation, married to one wife, as are Protestant Christian bishops and highly respected in his country. His son, a promising youth, is sent out to study abroad; he is now in India and will soon go to Europe. Nothing but good is spoken of the family life of the Rt. Rev. Otani Koye, as well as other priests of this Shinshu sect.

The case is different with the Eastern Shinshu sect; but the Japanese missionaries of San Francisco have as little to do with them, as Mr. Gordon has with the polygamist Mormon Christians.

The present high-priest of the Eastern Shinshu, it is true, has been bitterly denounced by sincere Buddhists and a reform movement personally antagonising him has caused a split in his church; yet even his enemies grant that he is an uncommonly able man who in spite of all accusations is able to hold his own and remain in his influential position. His friends claim that the accusations are unfounded or are based upon misrepresentations. Mr. Gordon says the worst that ever has been said of him. Having no means nor time to find out the truth of the case, and having nothing whatever to do with the man, I propose to leave the matter in abeyance; for the question whether or not a religion should have a respectful hearing can not be disposed of by producing a black sheep from its fold. The fact cannot be doubted, and is least of all doubted by Prof. Max Müller whose views of Buddhism have undergone considerable change, that there are a great number of pure-hearted Buddhists, and I claim that the presence of Buddhist missionaries in this country will be beneficial to Christianity here as well as to Buddhism abroad. The evils which are caused by a friendly exchange of thought are transient but the blessings are permanent.

P. C.

A BUDDHIST CONVERT TO CHRISTIANITY.

All those who attended the Parliament of Religions at Chicago in 1893 will remember the stir made by the speech of Kinza Hirai, a Japanese Buddhist, a modest

young man who criticised severely the un-Christian treatment that his country received at the hands of the Christian nations. At the time I wondered whether in any other country a censure of the races represented by the audience would have been as warmly received as this Japanese Buddhist's was by his listeners at Chicago, who desired to demonstrate that he had a perfect right to speak out boldly, and encouraged the pluck of the modest-looking young Japanese. Mr. Kinza Hirai travelled for some time in this country lecturing on Japan and Japanese religion, and those who knew him and heard him speak will be interested in learning that he has become a Unitarian Christian.

In reply to the report of the Religious Parliament Extension he says:

"In my country the Religious Parliament idea has made very little progress, notwithstanding my efforts towards it, and there has occurred nothing to be specially noted as to raise the honor of my country. My sensation of a great shame was too strong to do any flattering statement. Although among the Buddhists there are not wanting those who show their sympathy to the Parliament Extension, yet they are not bold enough to join the movement chiefly from fear of being misunderstood. The Unitarians of Japan have the broadest idea among our religionists, and I could not find any other way better than to co-operate with them as the step towards our goal. I have been a member of the Unitarian Association here since last year and now live in Tokyo. What we the Japanese Unitarians do is in fact the Parliamentary Extension Movement. The American Unitarian Conference is to be held next May in Boston, when I, with another member, am going to represent the Japanese Association and will stay one or two days in Chicago, where I wish to have the pleasure of seeing you again.

"Your valuable magazine *The Open Court* has ever served as the organ of the Parliament Extension. I am always impatient to see the issue of every next number. It is a pity for the magazine as well as for our people, especially for the Japanese religionists, that it can not get a wide circulation in this country on account of its being written in English. I have ever considered that if the magazine translated into our own tongue, perhaps with a little modification on the general plan be published here, the benefit done for our country would be incomparable."

WESTERN PHILOSOPHICAL ASSOCIATION.

A number of teachers and students of Philosophy in the West met at Kansas City on January 1, 1900, and organised the Western Philosophical Association.

The aim of this society, says its prospectus, is "to stimulate an interest in philosophy in all its branches and to encourage original investigations."

"All advanced students of philosophy are eligible for membership to the new Association. There are about thirty charter members, representing the states of Missouri, Nebraska, Kansas, Colorado, Iowa, Minnesota, and South Dakota.

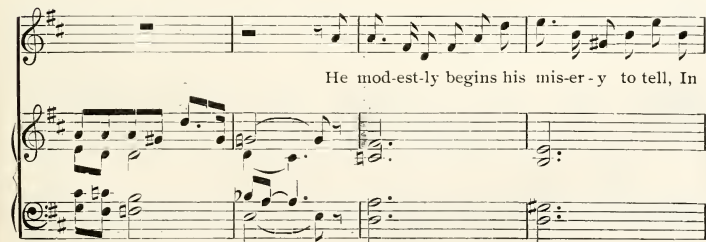
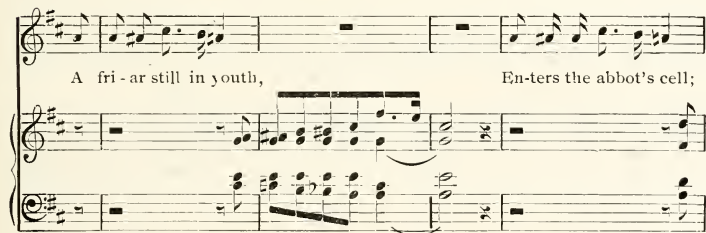
"The officers of the Association for the year 1900 are the following competent persons: Frank Thilly, Ph. D., University of Missouri, President; Olin Templin, A. M., University of Kansas, Vice-President; A. Ross Hill, Ph. D., University of Nebraska, Secretary-Treasurer; with G. T. W. Patrick, Ph. D., University of Iowa, and Cleland B. McAfee, Ph. D., Park College as additional members of the Executive Committee.

"The first regular meeting of the Association will be held at Lincoln, Nebraska, during the Christmas holidays of 1900."

THE FRIAR.

PAUL CARUS.

OLIVER H. P. SMITH.



2

THE FRIAR.

hope con-fes-sion will In - sur-gent doubts dis - pel; "De-

The first system of the musical score for 'THE FRIAR.' It consists of a vocal line and a piano accompaniment. The vocal line is in G major (one sharp) and 4/4 time. The lyrics are 'hope con-fes-sion will In - sur-gent doubts dis - pel; "De-'. The piano accompaniment features a steady bass line and chords in the right hand.

spite my fast and pray'r, With me no peace doth dwell!" The

The second system of the musical score. The vocal line continues with the lyrics 'spite my fast and pray'r, With me no peace doth dwell!" The. The piano accompaniment continues with similar harmonic support.

old man kind - ly looks In his re-pent - ant face. Quoth

The third system of the musical score. The vocal line concludes with the lyrics 'old man kind - ly looks In his re-pent - ant face. Quoth'. The piano accompaniment features more complex rhythmic patterns, including triplets in both hands.

THE FRIAR.

3

he, "Thou must be-lieve in God and in His grace!" "Ah,

The first system of the musical score for 'The Friar'. It consists of three staves: a vocal line in treble clef with a key signature of one sharp (F#) and a common time signature, and two piano accompaniment staves in treble and bass clefs with the same key signature. The vocal line contains the lyrics 'he, "Thou must be-lieve in God and in His grace!" "Ah,'. The piano accompaniment features a rhythmic pattern of eighth and sixteenth notes in the right hand and a simpler bass line in the left hand.

fa - ther, that I could These

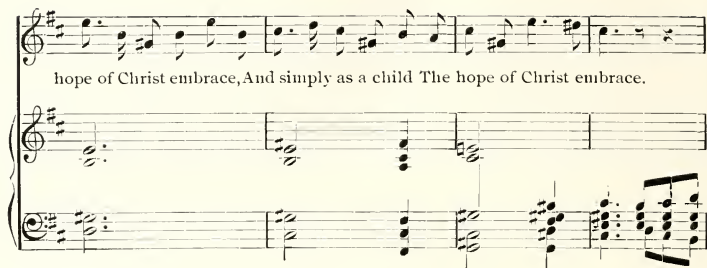
The second system of the musical score. The vocal line continues with the lyrics 'fa - ther, that I could These'. The piano accompaniment continues with the same rhythmic pattern, featuring a more active bass line in the left hand.

thronging doubts efface, And simp - ly as a child The

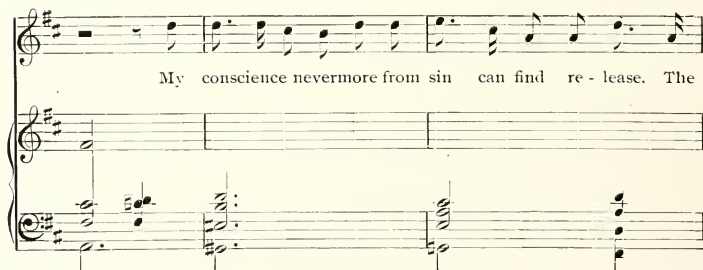
The third system of the musical score. The vocal line continues with the lyrics 'thronging doubts efface, And simp - ly as a child The'. The piano accompaniment continues with the same rhythmic pattern, featuring a more active bass line in the left hand.

4

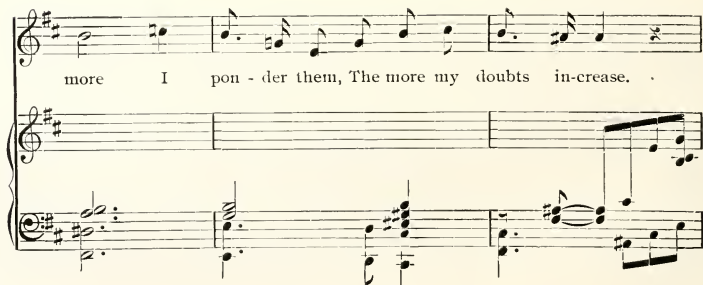
THE FRIAR.



hope of Christ embrace, And simply as a child The hope of Christ embrace.



My conscience nevermore from sin can find re - lease. The



more I pon - der them, The more my doubts in - crease.

THE FRIAR.

5

Oh, to have faith in God! Oh, that this pain would cease, A-

p *Agitato.*

las! is there no truth, And holdeth life no peace?"

Old

tomes on musty shelves Are ranged the cloister round. Their au - - thors

6

THE FRIAR.

anx - ious-ly Had sought truth's depths to sound. In

The musical score for 'THE FRIAR.' consists of a vocal line and a piano accompaniment. The vocal line is in G major (one sharp) and 4/4 time. It begins with a half note G4, followed by quarter notes A4, B4, and C5, then a half note D5, and a quarter note E5. The piano accompaniment features a steady eighth-note pattern in the right hand and a more complex pattern in the left hand, including chords and moving lines. A dynamic marking of *pp* (pianissimo) is present in the piano part.

vain! The mys-ter-y is none the less profound. Now, thro' the books, methinks, Com-

The musical score continues with the vocal line and piano accompaniment. The vocal line has a half note G4, followed by quarter notes A4, B4, and C5, then a half note D5, and a quarter note E5. The piano accompaniment continues with a steady eighth-note pattern in the right hand and a more complex pattern in the left hand, including chords and moving lines.

pas - sion did re - sound." The

The musical score concludes with the vocal line and piano accompaniment. The vocal line has a half note G4, followed by quarter notes A4, B4, and C5, then a half note D5, and a quarter note E5. The piano accompaniment continues with a steady eighth-note pattern in the right hand and a more complex pattern in the left hand, including chords and moving lines.

THE FRIAR.

7

ab - bot wist - ful - ly Gazed on him in his pain. A

si - lence long and sad did all his heart ex - plain; But

In his thought-ful eyes Was

8

THE FRIAR.

writ this dole-ful strain: "Thou look'st for peace and truth In

this our world in vain, In this our world in vain!"

meno mosso.

p

rall.

ppp

The musical score is written for a voice and piano. The key signature has two sharps (F# and C#), and the time signature is 4/4. The vocal line is in the upper staff, and the piano accompaniment is in the lower staves. The lyrics are written below the vocal line. The score includes several performance markings: *meno mosso.* (slower), *p* (piano), *rall.* (ritardando), and *ppp* (pianissimo). The score is divided into four systems, each with a vocal line and piano accompaniment. The first system contains the lyrics "writ this dole-ful strain: "Thou look'st for peace and truth In". The second system contains the lyrics "this our world in vain, In this our world in vain!". The third system contains the marking *meno mosso.* and the marking *p*. The fourth system contains the marking *rall.* and the marking *ppp*.

ALBERT AND JEAN RÉVILLE.

We congratulate ourselves on being able to present to the readers of *The Open Court* the portraits of MM. Albert and Jean Réville, of Paris, France, the moving spirits of the International Congress of the History of Religions, to be held during the Universal Exposition at Paris from September 3d to 9th, 1900. M. Jean Réville's own article in the present number will give adequate information regarding the purpose, character and constitution of this Congress, and we may therefore limit ourselves in this note to a brief biographical sketch of the two personalities who have been its main organisers.

M. Albert Réville, the president of the Congress, was born at Dieppe, France, in 1826. He is a Doctor of Theology, which in Europe is an honorary degree denoting scholarship and talents of high distinction, and was for twenty-two years pastor of the French church at Rotterdam, Holland, where he acquired the repu-



ALBERT RÉVILLE.



JEAN RÉVILLE.

tation of being one of the foremost preachers and theologians of French Protestantism. Since 1880, he has been professor of the history of religions in the Collège de France at Paris, where he created a branch of instruction which did not exist prior to his time. Since 1886 he has also been president of the Faculty of Religious Sciences in the École Pratique des Hautes Études at the Sorbonne. So successful and zealous has he been in the prosecution of his aims that it is doubtful whether the facilities for study and research in this department of religious science are to be surpassed in any other university of the world.

Besides numerous articles in the *Revue de théologie de Strasbourg*, in the *Revue des Deux Mondes*, and in various other magazines, M. Albert Réville has written a large number of works, of which the principal ones are as follows: *Essais de critique religieuse* (1860); *Études critiques sur l'Évangile selon St. Matthieu* (1862); *Théodore Parker, sa vie et ses œuvres* (1865); *Histoire du Dogme de la divinité de Jésus Christ* (1876); *Prolegomènes de l'Histoire des Religions*

(1881); *Les Religions des non civilisés* (2 vol., 1883); *Les Religions du Mexique, de l'Amérique centrale et du Pérou* (Hibbert Lectures, French edition, 1885); *La Religion Chinoise* (1889); *Jésus de Nazareth* (2 vol., 1897). M. Réville's *Manual of Religious Instruction* has been translated in several languages. As appears from one of the above-cited works, he has been a Hibbert lecturer and he is also known in this country as a contributor to *The New World*, of Boston.

M. Jean Réville is the son of M. Albert Réville, and has been scarcely less active than his father in the field of religious investigation. He was born in Rotterdam, Holland, in 1854, is also a Doctor of Theology, and one of the Protestant leaders of France. He occupies the post of chaplain in the Lyceum of Henry IV. at Paris, and has been a lecturer on the History of the Christian Church at the École des Hautes Études at the Sorbonne since 1886 as well as at the Faculty of Protestant Theology since 1894; he has also been editor of the *Revue de l'Histoire des Religions* since 1884.

His principal works are as follows: *La doctrine du Logos dans le IV^e Évangile et dans les œuvres de Philon* (1881); *La Religion à Rome sous les Sévères* (1886; German translation by G. Krüger in 1888); *Les Origines de l'Épiscopat* (1894); and *Paroles d'un libre-croyant* (1898).

THE CURVE OF IMMORTALITY.

We have printed as an Appendix to the present number of *The Open Court* an essay which is likely to be of real interest to many of our readers, and which for others will possess at least the attraction of a curiosity. The author, who is a septuagenarian, was for several years a University professor of Astronomy and subsequently for a third of a century scientific editor of one of the great Chicago dailies.

To forestall at the outset all possibility of misunderstanding, attention should be called to the fact that the author does not claim for his argument the value of a *proof* of the doctrine of sentient existence after death and that he expressly remarks that it would be "absurd" to do so. In addition to this explicit reservation of the author, we would insist on the following independent and general critical point of view which should be carefully pondered by the reader both before and after his perusal of the argument. Mathematics, being in one of its aspects, the science of form and of the combinations of form, there is no formal relation conceivable that cannot be expressed by it. Its world of pure and possible forms is absolutely inexhaustible, and is infinitely richer than the world of material and physical forms. It does not follow therefore that because a mathematical relation exists there must exist corresponding to it in the so-called objective world some definite physical reality. We have geometries of *n*-dimensions but no worlds of *n*-dimensions. Now as to the peculiarity of the curve in question, namely its completeness in one of its parts and the break in its continuity, it is to be remarked that it shares this property with a very large number of other algebraical curves, and that these curves present such "infinite variety" that there is scarcely a dogma of religion so wild or exceptional that could not be put into very close analogy with some one of them. It would be very easy, for example, to construct or find an analogy in algebraical geometry for the Buddhist doctrine of the transmigration of souls, or of the dogma of cycles of existence. In sum, the mechanism for graphically representing algebraical possibilities, which Descartes gave us, is far more powerful and comprehensive than even the wildest fancies of the founders and dog-

matists of the great historical religions. A skilful algebraical geometer could give the author of Revelation his tit for tat at every turn.

T. J. McC.

DR. ISAAC M. WISE.

We have learned with deep regret of the death of Dr. Isaac M. Wise, of Cincinnati. Dr. Wise was the Nestor of the Jewish rabbis in America, and as pastor of the B'ne Jeshurun congregation was for a great number of years the protagonist of reformed Judaism in the West. His activity, however, was not limited to the pul-



ISAAC M. WISE.

pit, for he was also the author of a number of books and pamphlets, and was greatly interested in the theoretical questions of religion. He had been a reader of *The Open Court* from the beginning, and we exchanged from time to time letters on subjects of common interest. He was the founder of the Hebrew Union College, and had been its president since 1875. He also founded and was until his death president of the Central Conference of American Rabbis. He founded the *American Israelite* and *Die Deborah*, and edited both to the last. Deceased was within a few days of his eighty-first birthday. His son Dr. Julius Wise, better known as *Nickerdown*, will largely continue his father's work on the Jewish press.

SOLOMON AND SOLOMONIC LITERATURE.

"The general world has for ages been working under the spell of Solomon while believing him to be dead," says Mr. Moncure D. Conway in his latest and perhaps the most important work of his long literary and public career. "Solomon is very much alive. Many witnesses of his talismanic might can be summoned 'from the homes and schools wherein the rod is not spared, however much it 'spoils the child, and where youth's 'flower of age' bleaches in a puritan cell because the 'wisest of men' is supposed to have testified that all earth's pleasures 'are vanity. And how many parents are in their turn feeling the recoil of the rod, 'and live to deplore the intemperate thirst for 'vanities' stimulated in homes 'overshadowed by the fear-of-God wisdom for which Solomon is also held responsible? On the other hand, what parson has not felt the rod bequeathed to the 'sceptic by the king whom Biblical authority pronounces at once the worldliest 'and the wisest of mankind?"

Many of the articles which constitute this book have appeared in *The Open Court*, and our readers, who will remember the skill, learning, and sententious wit with which Mr. Conway has collated and interpreted the Solomonian legends of the world, will be glad to have these essays, with much additional and supplementary material, collected into the present compact and attractive volume.

In the development and spread of that vast body of universal folklore known as the Solomonian legends, Mr. Conway believes there are two distinct streams of evolution; one issuing from the wisdom books of the Bible, the other from the law-books. These two streams "are clearly traceable in their collisions, their periods of parallelism, and their convergence,—where, however, their respective inspirations continue distinguishable, like the waters of the Missouri and the Mississippi after they flow between the same banks." He continues: "The present 'essays by no means claim to have fully traced these lines of evolution, but aim 'at their indication. The only critique to which it pretends is literary. The 'studies and experiences of many years have left me without any bias concerning 'the contents of the Bible, or any belief, ethical or religious, that can be affected 'by the fate of any scripture under the higher or other criticism. But my interest 'in Biblical literature has increased with the perception of its composite character ethnically. I believe that I have made a few discoveries in it; and a volume 'adopted as an educational text-book requires every ray of light which any man 'feels able to contribute to its interpretation."

And every reader of this book, whatever his prepossessions, will say that if Mr. Conway has not "enlightened" his subject, he has certainly *enlivened* it. We quote his beautiful concluding words:

"The human heart kneels before its vision, and with Mary Magdalene cries 'Rabboni, My Master; but Theology recognises only the perfunctory Rabbi, and 'carries her beloved off into union with thunder-god, war-god, or with a deified 'predatory Cosmos. Yet will not the heart be bereaved of its vision; it still sees 'a smile of tenderness in the universe. And philosophy, though it regard that 'smile as a reflexion of the heart's own love, may with all the more certainty itself 'find a religion in this maternal divinity in the earth, ever aspiring to its own supreme humanity.

"Solomon passes, Jesus passes, but the Wisdom they loved as Bride, as 'Mother, abides, however veiled in fables. She is still inspiring the unfinished

"work of creation, and her delight is with the children of men." *Solomon and Solomonic Literature*. By M. D. Conway. Chicago: The Open Court Pub. Co. London: Kegan Paul, Trench, Trübner & Co. Pp., 248. Price, \$1.50 (6s.).

THE MONK.

BY J. L. M'CREERY.

A pious monk, in mediæval days,
 Within the confines of his narrow cell
 Fell on his face and passionately prayed :
 " O Being infinite and immanent,
 " Pervading Spirit of the Universe—
 " If aught there be in earth or heaven besides
 " A figment by tradition handed down,
 " A vast Nonentity, to which we cling'
 " With fierce tenacity because we shrink'
 " From saying, ' Death is an eternal sleep '—
 " If Thou hast said, ' Ask and ye shall receive,'
 " Or promised to the heavy-laden soul,
 " ' Come unto me and I will give thee rest,'
 " Grant me, O God, some token that Thou art,
 " Lest I should perish in my unbelief :
 " I weary of this world of vanities,
 " Its transitory and illusive joys,
 " Of my own ceaseless and ignoble strife
 " To gather bubbles to my cheated arms ;
 " I long for the Eternal and the True,
 " I thirst for Peace, and Holiness, and Thee."

As gently as the faint but growing dawn
 Displaces darkness from the face of earth,
 About the monk a tender glory grew ;
 He seemed to be no longer in his cell ;
 As tenuous as the spiritual world
 Had been before to his material eyes,
 Such gossamer were the monastery walls
 To his illumined spiritual sense,
 And he afloat upon the pulsing waves
 Of an ethereal infinitude.

Then from the glory came a Voice that said :
 " My son, lo, I have waited for thee long ;
 " Have heard thy cry, ' O what and where is God ?'
 " As though a bird should ask, ' Where is the air ?'
 " Thou wert enveloped in the Great I Am,
 " But knew it not, because thy sense was dim :
 " I am thy Life—there is no other life ;
 " I am the central and surrounding Source of Light ;
 " I am the Fountain of all forms of Joy ;
 " I am thy faithful never-failing Friend ;

"I am a Father's ever-watchful care;
 "I am a Mother's brooding tenderness;
 "I am thine Elder Brother by thy side;
 "I am at once thy Bridegroom and thy Bride;
 "Naught comes to thee that cometh not from Me:
 "I love thee with an everlasting Love—
 "But can not give thee light, nor love, nor joy,
 "Beyond what thou art willing to receive.

"Behold the many-chambered Nautilus:
 "A dweller, at her choice, in different realms,
 "Sometimes, when skies are bright and seas are calm,
 "She leaves the darkness of her native depths,
 "Floats to the surface and outspreads her sail,
 "Rides on the ocean's gently heaving breast,
 "Rejoicing in the light and warmth of day.
 "Had she remained for life where she was born,
 "Content to delve in the primeval slime,
 "Creeping in caves a hundred fathoms deep,
 "No ray of sunshine could have reached her there,
 "No breath of summer filled her tiny sail:
 "God's radiance bathes the universe in vain
 "For thee, unless thou rise into the light."

The monk beheld, and heard; and filled with awe
 And sweet and solemn peace, he fell asleep.

Next night again the pious monk lay down,
 And prayed: "Come thou divine and glorious One,
 "Thrill me again with new-found happiness!"
 But prayed in vain; impenetrable gloom
 Surrounded him—grew deeper as he prayed.
 "Alas!" he cried, "God hath forsaken me,
 "Or my experience was but a dream!"
 And then he fell upon his face and wept.

But through the darkness came a still, small voice:
 "Remember, son, the tenor of thy prayer:
 "It was for happiness. Thou turned from God,
 "Thy narrow purpose centered on thyself;
 "If thou wouldst see the light, look up, not down;
 "Look out, not in—for selfward all is dark;
 "And God reveals himself unto the soul
 "That seeketh not its own delight, but Him."

In time the pious monk this lesson learned;
 And when he had forgot to care for joy,
 Enamored of the highest excellence,
 In love with Justice, Truth, and Holiness,
 And filled with tender pity for his kind,
 Again the golden glory filled his cell:

"Dear Lord," he cried, athrill with ecstasy,
 "Thou knowest that I love Thee—stay, O stay!"

Then at the monastery's outer gate
 He heard the ringing of the outer bell;
 He hastened thither, and in waiting found
 A beggar, weary, hungry, and in rags;
 He led the stranger in, and gave him food,
 And washed his feet, and bade him stay till morn,
 Then sought again his cell with eager haste.
 The formless glory had assumed a shape,
 A radiant and smiling angel now,
 Who said, "Well done; if thou hadst waited here,
 "When duty called thee, I could not have stayed;
 "But as thou turnest from thy highest joy
 "To serve the lowest of thy fellow-men,
 "I come to dwell with thee forevermore."

BOOK-REVIEWS.

AN ETHICAL SUNDAY SCHOOL. A Scheme for the Moral Instruction of the Young.
 By *Walter L. Sheldon*, lecturer of the Ethical Society of St. Louis; author
 of "An Ethical Movement." London: Swan Sonnenschein & Co., Ltd.
 New York: The Macmillan Co. 1900. Pages, 206 Price, 3s.

Mr. Walter L. Sheldon, lecturer of the Ethical Society of St. Louis, has here given us a first rough sketch of his scheme for the moral instruction of the young as carried out by him in recent years with the congregation of his city.

It has been Mr. Sheldon's endeavor to reverse the process customary in the average Sunday School; in his scheme the teaching of religious conceptions so called is made to come at the end of the course, while the elements of morality are taught at the beginning. It has not been his intention to antagonise the existing religious beliefs, but to supplement them by more methodical and more persistent religious school-work. The religious services consist of responsive exercises which deal with great ethical truths, as the traditional Sunday schools deal with theological truths. These responsive exercises are intoned by the superintendent or the teachers, and are answered by the school. To us, most of these lack the note of time-honored seriousness, or shall we say, emptiness, of the traditional exercises; for example, the refrain "We are glad to be alive." Songs are then sung, and various religious and secular pictures are exhibited and contemplated for the purpose of "teaching the vague sense of the Infinite lurking in the minds of the young." One of the main features of the course of ethical instruction as here designed is precisely the establishing of "this background of sentiment," the desire to "associate the sentiments belonging to the Eternal, the Infinite, the Absolute, with the distinctions between Right and Wrong, with the thought of the Moral Law—but not to use these words so that they shall become hackneyed." This "background of sentiment," Mr. Sheldon admits, might have comparatively little value if it stood by itself; its significance comes in only when it is connected with other work, which is the rearing of an ethical superstructure upon this foundation of vague poetical and æsthetic feeling. A further help for associating this "solemn mystical feeling about the Eternal and the Absolute, with the teachings of moral-

ity" is sought in the musical service, which consists of piano, violin and cornet solos, or of songs. The different mornings are devoted to the different duties associated with the state, the home, etc. For each day there is a "Beautiful Thought" selected from the classical ethical literature of the world. Finally, some one of the young people gives a recitation, and the leader of the school reads a short story which may be from the Bible, or may illustrate some critical period or mode of thought of the world's religious development.

Both orthodox and free thinkers will find much to criticise in Mr. Sheldon's scheme; the one will find it lacking in unction and force, and the other as sanctioning too strongly the weaker points of the old methods; but we believe that both sides will find suggestions in the book which may stand them in stead in their own work. We have Mr. Sheldon's assurance that the scheme is working successfully, and that its success was attained only after many years of disappointment and failure.

μ.

Lovers of artistic book-making will thank us for calling their attention to the recent publication of Mr. Mosher's seventh "Old World" edition of Fitzgerald's *Rubáiyát of Omar Khayyám*. The person who is unacquainted with the quatrains of the great Persian Astronomer-Poet has missed the inspiration of the most delightful production of the world's Wisdom-Literature, and he could make amends for his soul's unspeakable omission in no more fitting way than by forming that acquaintance through the medium of Mr. Mosher's elegant little volume. He will have here the parallel texts of the most important of Fitzgerald's own editions, a pronouncing vocabulary, a biographical sketch of Fitzgerald's life by Mr. W. Irving Way, a comparative table of quatrains, together with Fitzgerald's original introductions. The edition is limited to 925 copies on Van Gelder paper (\$1.00 net) and 100 numbered copies on Japanese vellum (\$2.50 net). (Thomas B. Mosher, 45 Exchange St., Portland, Me.)

The November number of the Bibelot Series, by the same publisher, was *Our Lady's Tumbler*: a twelfth century legend done out of old French into English by Philip H. Wicksteed. This number having been exhausted, but in considerable demand, Mr. Mosher has brought out the story in an old-style *format* with Chiswick headbands and rubricated initials, and done up in decorated Japan vellum wrappers. 450 copies have been printed on Van Gelder paper (\$1.00 net) and 50 numbered copies on Japan vellum (\$2.00 net).

To Mr. Mosher's spring publications are to be further added: (1) a vestpocket edition of Elizabeth Barrett Browning's *Sonnets from the Portuguese* with a preface by Edmund Gosse (blue paper wrapper, 25 cents net); (2) *Lyrics*, by Cosmo Monkhouse, being the March number of the *Bibelot Series* (5 cents); and (3) *Golden Wings*, a tale by William Morris, being the April number of the *Bibelot Series*.

NOTES.

The article on "The Jesuits and Mohammedans" in the March *Open Court* was wrongly attributed to Dr. Arthur Pfungst. The real author is an editorial writer on the staff of the *Frankfurter Zeitung*. Our error was due to the article's having been originally called to our notice by Dr. Pfungst.

APPENDIX.

CURVE OF IMMORTALITY

MATHEMATICAL ANALOGY
TO DEATH AND THE RESURRECTION

By A SEPTUAGENARIAN

"If a man die, shall he live again? Job, xiv, 14.

"Then shall the dust return to the earth as it was, and the spirit shall return unto God who gave it." Ecclesiastes, xii, 7.

"The Lord himself shall descend from heaven with a shout, with the voice of the archangel, and with the trump of God: and the dead in Christ shall rise first." I. Thessalonians, iv, 16.

"*If there be no resurrection of the dead, * * * then is our preaching vain, and your faith also is vain * * ** The trumpet shall sound, and the dead shall be raised incorruptible * * * For this corruptible must put on incorruption, and this mortal must put on immortality." I. Corinthians, xv, 13, 14, and 52, 53.

"When the Son of man shall come in his glory, and all the angels with him, then shall he sit upon the throne of his glory: And before him shall be gathered all the nations * * * And these" [the wicked] "shall go away into eternal punishment, but the righteous into eternal life." Matthew, xxv, 31, 32, and 46.

"The hour cometh in which all that are in the tombs shall hear his voice, and shall come forth." John v, 28 and 29.

"I believe in * * * the resurrection of the body, and the life everlasting. Amen." Apostles' Creed.

The author of the matter on the following pages has listened to a great many funeral discourses, in churches of different denominations and elsewhere, but does not remember to have heard the doctrine of a final, simultaneous, resurrection of the dead insisted upon in a single one of the number. In numerous instances the Pauline sentences, quoted above, were *read* in course as part of the regular service, but "the resurrection of the body" was not specifically alluded to otherwise by Protestant clergymen. On the other hand, the immortality of the soul was alluded to with more or less fullness in the great majority of their addresses, and generally was spoken of as if belief in it as a verity were taken for granted by the members of the audience as well as by the speaker. Of course it is known that Roman Catholics feel bound to believe that there is a purgatory for the soul while the body is in the grave. But, as a rule, the remarks made by Protestant clergymen were such as to justify the inference that they believe the spirit, immediately after the death of the body, returns "unto God who gave it," and has its status fixed without waiting for a judgment that is to follow a general resurrection. The author supposes that the preceding statement holds true, approximately, if not accurately, in the case of many millions of funeral dis-

courses that have been delivered within the last half-century. He, however, does not wish to be understood as claiming that many or any of the clergy deliberately abstain from preaching the doctrine of a final resurrection of the dead, which, for many thousands of millions who have died already, and probably for untold millions who will die in the future, would occur long after the complete decomposition of the body (except here and there a few bones), and the recombination of the decomposed material into other organic forms. Yet it can not be denied truly that in recent years there has been a growing and widening inclination among regular attendants on church services, as well as outside their ranks, to doubt the truth of that particular doctrine; and it were no wonder if the leaven of doubt has entered the minds of some of those who have pledged themselves in ordination vows to preach "the faith which was once for all delivered unto the saints."

Also, it hardly will be denied that if any such doubt be entertained it is based in large part upon considerations named in the few lines last preceding this, which constitute real or supposed scientific grounds for scepticism, or that the doctrine of the immortality of the soul would be objected to less if it were not associated with that of a resurrection of the body. It, therefore, should be recognized as a matter of some interest to ascertain if scientific reasoning can be brought to bear on the subject, either directly or indirectly. The author has ventured to discuss the problem along mathematical lines, having in mind a remark made by Professor Huxley, that "the facts of consciousness are, practically, interpretable only by the methods and the formulæ of physics."

The first section of the following essay should not be difficult reading to any one who has mastered the notation of elementary algebra, because the author has explained with sufficient fullness the representation of lineal magnitudes by algebraic symbols, so far as they are required to be used in the work. He can promise that such a reader will be able to understand this first section, provided he is willing to go through it carefully. The second part is a little more abstruse, but correspondingly more comprehensive. For both sections, it is hoped that the new line of thought they are intended to open up will be found interesting enough to repay the labor of a patient perusal.

No. 2 Groveland Park, Chicago.

C.

Easter, 1900.

CURVE OF IMMORTALITY.

MATHEMATICAL ANALOGY TO DEATH AND THE RESURRECTION.

It often has been asserted that physical science furnishes no support to the claim that there is a spirit entity in man the individuality of which persists after the death of the body. It is true that Paul sought to establish a parallel between the resurrection of a "spiritual body" and the growth from a vegetable seed which can not be "quickened except it die"; and that lesser lights have adduced insect metamorphosis as another parallel to a claimed persistence from a material existence into one that is spiritual. But both of these are poor as illustrations, and utterly valueless as alleged proof. Paul virtually admits that the vegetable entity which springs from the seed is no higher or lower in the scale of existence than was its immediate predecessor, being identical with it in "kind." In the case of the insect phenomenon cited, the alleged illustration is a much poorer one, for the organism does not rot while in the pupa state, and in very many of the Class the moth is exceedingly short lived, dying immediately after having provided for the perpetuation of its species. There is nothing in either of these assumed parallels, or illustrations, that points to a higher or better state of existence, still less to one of persistence of the individual entity through a long course of ages. The writer, some years since, called attention to the persistence of memory while the material constituents of the body are giving place to new ones, as the strongest scientific indication we possess toward a continuance of individual existence after the death of the body; but even that is no proof. And we can not believe in the eternity of matter while refusing to admit that force is eternally existent, without being severely illogical; but we have no more scientific warrant for believing in a perpetuated individuality for any named collection of physical force than we have for that of any known aggregation of material units.

An argument against the value of belief in a future state of existence has been drawn from the mathematics, and many have regarded it as a strong one. It may be of interest to exhibit this, in brief, and all the more so as we can derive in the opposite direction an argument that is equally strong, if not stronger. In order to do this, we employ the method of rectangular coördinates.

Through any conveniently situated point in a vertical plane, we may draw a horizontal straight line and a vertical straight line, and take these lines as the axes of any desired number of rectangular coördinates. They intersect at right angles, and may be supposed to extend to any required distance in each direction in the plane in which they are drawn.

<i>Any distance measured</i>	<i>Is designated by</i>
To the right from the vertical axis,	x
" " left " " " "	$-x$
Upward from the horizontal axis,	y
Downward " " " "	$-y$

each distance being measured on a line which is parallel to an axis.

The radius of the circle is denoted by a . The equation for the circle as referred to an origin at the circumference, is $y^2 = 2ax - x^2$; and for every possible numerical value of x , when substituted in this equation, we obtain two equal values of y , one above the horizontal axis and the other below it, because $+y^2 = (-y)^2$ and $= (+y)^2$. Furthermore, any value of x that is negative, or that is greater than $2a$, will give a minus value for y^2 , showing that there is no point in the curve to the left from D or to the right from A, in our first diagram.

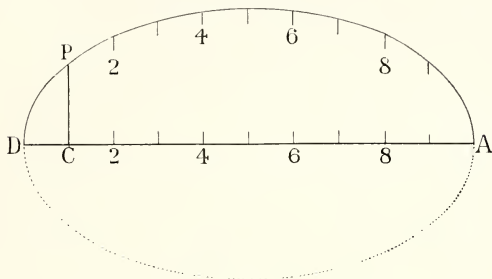
Now, if we introduce another value, p , and write

$$y^2 = 2px - (p/a) \cdot x^2$$

we shall have an equation which holds good for all the conic sections, p being a perpendicular from the focus in each case, and the focus becoming the center in the case of the circle. Also, if we take q to designate the distance from the origin to the focus, then in the circle, $p = q$; in the ellipse, p is greater than q , but less than $2q$; in the parabola, $p = 2q$; and in the hyperbola p is greater than $2q$, the value of a being minus in the last-named curve, so that

— $(p/a) \cdot x^2$ is a positive quantity to be added to $2px$ in order to obtain the value of y^2 in the hyperbola. In the parabola a is infinite, whence $y^2 = 2px$.

We present here a figure of the ellipse, because it is that one of the conic sections with which the progress of human life most frequently has been supposedly compared.



In this diagram $DA = 2a$; $CP = p$; and $DC = q$. If we take q as the lineal unit, and measure off two, four, etc., units from D , on the horizontal axis, the perpendiculars 2, 2; 4, 4; etc., will be the corresponding values of $+y$. Then, if we suppose the increase of x from zero to the length DC to correspond to the first seven years of life, that each of the succeeding increases of x by a unit corresponds to seven years, and that the resulting values of y be the measures of vital power at the different times, we shall have a pretty close parallel, not to every human life, but to the average of all the lives which are not terminated by accident or by disease other than those which are incident to old age. The measure of power increases from nothing at or just before the beginning of life, to its maximum between the ages of thirty and forty, declining thence to the death zero at about the point assigned by the Psalmist as "three score and ten." We may extend x as far as we please in the minus direction (to the left) from D , or as far as we please in the plus direction to the right beyond A , without obtaining for y any value that is other than imaginary. Hence, if this curve really be entitled to be called the equation of human life, then it holds out no hope of life beyond the grave.

Furthermore: if we choose to adopt into this discussion the very extensively entertained idea that the principle of negation is the principle of evil (as indicated all the way down from the "ye shall *not* surely die," said to have been spoken by the serpent in the garden of Eden, to the "acarm" of the Sanscrit, and thence along the stream of time to the latest claim that "unbelief is sin"), we may take the plus values of y , those which are situated above the horizontal axis, to represent the activities of the good and useful life, and the negative values of y , those which are situated below the horizontal axis, to represent the "pernicious activities" of the sinful life, these also being extinguished by death, and not followed by punishment beyond the grave.

It is true that in the parabola and hyperbola the value of y continually increases with every augment in the value of x , (and that we can construct a companion hyperbola to the left from the vertical axis), the one coördinate becoming infinite when the other is so; but in each of these cases, the curve is continuous, and presents nothing that could be adduced as a parallel to a real or apparent discontinuity between life in the body and life after death of the body. So with the cycloid, which is described by a point in the circumference of a circle while the circle is rolled along a straight line, as a carriage wheel rolls along a road. By keeping the circle rolling far enough we may produce any desired number of cycloidal curves, but all of them are equal in dimension to each other, comparable in this respect with the succession of individuals in a genealogical line of plant or animal existences; and there is no blank between them, each member of the succession of cycloids beginning at the same point as the one in which its immediate predecessor terminates. So, while the cycloid may be taken as typifying the progress of human life, it is not susceptible of application or similitude to a higher and more prolonged existence after death.

There is, however, a curve which contains the remarkable properties here suggested. It is represented by the equation

$$m^2 y^2 = x \cdot (x - b) \cdot (x + c).$$

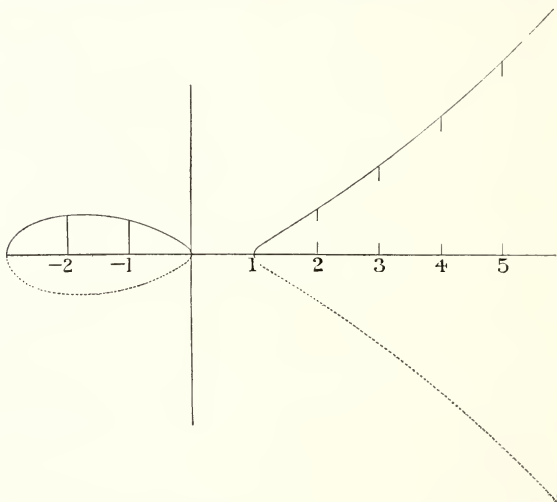
where m , b , and c retain the same numerical values while we assign to x any desired number of different numerical values, in succession, and thence determine from the equation the corresponding values of y . For instance, if we take $b = 1$, and $c = 3$, we may construct the following table of approximate values for $m y$:

x	$x - 1$	$x + 3$	$m^2 y^2$	$m y$
-3·	-4·	0·	0·	0·
2·7	3·7	+0·3	3·0	1·73
2·4	3·4	0·6	4·9	2·21
2·1	3·1	0·9	5·86	2·42
1·8	2·8	1·2	6·05	2·46
1·5	2·5	1·5	5·6	2·37
1·2	2·2	1·8	4·75	2·18
0·9	1·9	2·1	3·6	1·9
0·6	1·6	2·4	2·3	1·52
-0·3	1·3	2·7	1·05	1·03
0·	-1·0	3·0	0·	0·
+1·	0·	4·0	0·	0·
1·25	+0·25	4·25	1·3	1·15
1·5	0·5	4·5	3·4	1·75
2·0	1·0	5·0	10·0	3·16
3·	2·	6·	36·	6·
4·	3·	7·	84·	9·2
5·	4·	8·	160·	12·7
+6·	+5·	+9·	270·	16·4

Multiplying together the numbers in the first three columns we obtain the results in the fourth column, the product being zero in each case where one of the factors is zero. Then, assigning to m any desired value, we divide by it the numbers in the fifth column, and may construct a diagram such as the accompanying one, in which $m =$ about 3·9. It will be noted that the whole of the closed curve is on the minus side of the vertical axis, and that this part of the curve is not elliptical but oval shaped; and that any value of x which is less than -3 , also any value of x between the limits of zero and $+b$, makes y^2 a minus quantity, for which y has no real value.

The unit of measurement chosen for x in our diagram may be supposed to correspond to about twenty-five years, or a little less, in the duration of human life. Then, for that part of the curve which is above the horizontal axis we may trace the parallel somewhat as follows: Beginning at the extreme left we have a rising from nothingness to a maximum of vigor that is attained between the ages of twenty-five and thirty, which certainly for the physical (example in

the case of athletes), and with very many for the mental power, is a closer parallel than is offered by the ellipse as previously considered. Then comes a decline, slow at first, and proceeding more rapidly with a lessening of the distance from the vertical axis which is the normal terminus for bodily life. Following this (still proceeding toward the right), is a period of apparent nothingness, which may be compared with that of "rest" in the grave. Then the curve suddenly



starts upward, and its distance above the horizontal axis continually increases with every increase in the value of x , the one becoming infinite if the other be increased to infinity. It is not difficult to regard this right-hand portion of the curve as illustrating the resurrection of what St. Paul expressly stated will be "a spiritual body," in contradistinction to the "natural body" which was buried in the grave, and a continuous ascent thereafter toward the infinity of perfection and power to enjoy through a blissful eternity. Furthermore, if we choose to consider that portion of the curve which is below the horizontal axis as representing the career of the wicked (page 8), the idea will agree with what has been claimed by the orthodox churches through a long course of ages, to be reserved for sinners.

The assigning of minus values of x for that portion of the curve which is situated to the left from the vertical axis, harmonizes with the idea expressed by Benjamin Franklin in his "last words" which were: "A man is never perfectly born till after his death."

It should be remembered that this curve, with its apparently complete discontinuity between branches that may seem to be totally different in character, the one being a closed curve and the other an open one, however far extended, is obtained by the successive substitution of different numerical values of a single variable quantity(x), in a single equation. It, therefore, logically may be compared with the theological formula according to which a single vital force is sufficient to produce all the observed phenomena of human life on this earth, and after the death of the bodily organism, to revive, and then persist as an individual entity through all eternity.

The writer ventures to suggest still another comparison, though aware that some may deem it fanciful: The constant quantity c measures that change in the value of x which corresponds to the duration of life in the body, while the constant b measures the change in x that corresponds to the time elapsing between "death" and the resurrection; and the variable x is the quantity the unlimited extension of which gives the infinite branch of the curve, this being the one that corresponds to the immortal part of our existence. So, extracting the square roots, we have for the value of y in every position the product of the three factors, $\sqrt{x/m}$, $\sqrt{x-b}$, and $\sqrt{x+c}$; and these may be considered as corresponding to the "spirit, and soul, and body" which St. Paul seems to have believed constitute man as a whole. Also, it is obvious that while the relative strength of these components varies as between individuals, we may choose other numerical values than those previously assigned to the constant quantities in the mathematical equation; the result being an alteration in the relative magnitudes of the different parts of the diagram, but no change from the essential characteristics of the curve as already described.

It would be absurd to claim that this equation is *proof* of the doctrine of a sentient individual existence for man after death; the term "man" being intended to include "woman," Mohammedan doctrine to the contrary notwithstanding. But the writer does submit it as important, in this respect that it offers a close mathematical analogy, which he is not aware has been claimed previously to

exist (though the equation itself is not new); and that it is of far greater value as such analogy than are the growth of a plant from seed or the metamorphosis of insects, whatever *their* value may be. Inasmuch, however, as those puerile analogies have been insisted upon, the first by the "Apostle to the Gentiles," and the second by numerous theologians of later ages, the one still being cited at a large percentage of the funeral services held in civilized countries today, and the other semi-occasionally mentioned in the pulpits of christians of all denominations, it does seem to the writer that the equation offered and described in preceding pages is worthy of widespread attention. It offers the only close analogy yet discovered in the field of pure scientific reasoning to the doctrine of a resurrection of the body; and fairly may be commended to theologians of all sects as a good illustration of what they believe to be an important truth:—if "this, and nothing more."

SECOND SECTION.

The matter on the seven and a half pages next preceding this paragraph was printed separately from that which follows, and a copy of the former sent to each of thirty-three clergymen in this city, accompanied by the statement that "the author would be pleased to know that those to whom it is submitted deem it worthy of a wider circulation." The indicated division was made for the reason that what follows involves a little higher order of mathematical thought than was employed in the earlier presentation of the subject, though in Hutton's "Course of Mathematics" the imaginary unit and its powers are treated of on the very next page after the one which contains the statement that "no quantity can be found which, when raised to an even power, can give a negative result."

The author aimed at a mathematical treatment of the subject which would not be above comprehension by an average graduate from a Chicago High School. He did this because he hoped that each of the gentlemen would understand it as a result of careful reading, but in this respect he was mistaken. Some of them expressed regret that they were not familiar with the line of reasoning; and not one of the number offered any real criticism of the effort to point out a "Mathematical Analogy to Death and the Resurrection." So, the essay is presented in more complete form, without any such commendation as was hoped for, but also without fault finding. It would not be fair in this case to claim that "silence gives consent."

The author, however, does feel it to be his unpleasant duty to enter a mild protest against the claim by any one to be called "an educated man" if he does not know enough to enable him easily to follow out the line of thought presented on preceding pages. Mathematics constitute such an important part of the science of logic that one well may doubt ability to reason correctly on any abstruse subject by one who has not climbed up the ladder as far as the extraction of the square root in Algebra, and the comparing of right lines drawn in a circle for the study of Plane Trigonometry.

If we let c denote the diameter, then the equation for the circle (page 6) may be written:

$$y^2 = cx - x^2; \quad = x(c - x).$$

Making $c = 10$, assigning to x successive values from zero to 10, and performing the multiplication, we shall have the corresponding values of y^2 , as in the third column of the following table:

x	$c - x$	<i>Products.</i>	<i>y Values.</i>	
0	+ 10	0	0	0
+ 1	9	+ 9	3	1·8
2	8	16	4	2·4
3	7	21	4·58	2·75
4	6	24	4·9	2·94
5	5	25	5·0	3
6	4	24	4·9	2·94
7	3	21	4·58	2·75
8	2	16	4	2·4
9	+ 1	+ 9	3	1·8
10	0	0	0	0
11	- 1	- 11	3·32 <i>i</i>	1·99 <i>i</i>
12	2	24	4·9 <i>i</i>	2·94 <i>i</i>
13	3	39	6·24 <i>i</i>	3·75 <i>i</i>
14	4	56	7·48 <i>i</i>	4·49 <i>i</i>
15	5	75	8·66 <i>i</i>	5·20 <i>i</i>
16	6	96	9·8 <i>i</i>	5·88 <i>i</i>
+ 17	- 7	- 119	10·91 <i>i</i>	6·54 <i>i</i>
etc.	etc.	etc.	etc.	etc.

Extracting the square root of each of these products we obtain the values of y for the circle, as in the fourth column, these being the

distances from the horizontal axis to several points in the curve, above and below that axis. Now, if each of these quantities thus denoted by y be multiplied into 0.6, the results will be those given in the fifth column, which are the values of y in the ellipse the principal axes of which are in the ratio of 6 to 10, as represented in the diagram on page 7.

If we take m to denote the ratio of the principal axes in the ellipse, we shall have, for that curve:

$$y^2 = m^2 \cdot x \cdot (c - x); \text{ or } \pm y = m \cdot \sqrt{x \cdot (c - x)}.$$

which becomes the equation for the circle when m equals unity.

It is evident that if we assign to x any values greater than c , which in the present instance is assumed equal to 10, the resulting values of y^2 will be minus quantities, which can not have real roots. But, we may consider any particular value of $-y^2$ as equal to plus y squared, multiplied into minus unity, that is $-y^2 = y^2(-1)$; and then also we may write its square root as equal to $\pm y \cdot \sqrt{-1}$, the expression, $\sqrt{-1}$, denoting what is called "the imaginary unit," and often is represented by i . With this notation the latter part of the table gives, in the fourth column, the results for the equilateral hyperbola, and in the fifth column those results multiplied into 0.6, which we have assumed as the value of m for the ellipse in the cut on page 7.

These products of an actual quantity into an imaginary one might be rationalized by assuming the difference between c and x to be a positive quantity, whichever of those two be the greater, or by regarding m^2 as negative in the hyperbola while it is positive in the ellipse. The truth is that in analytical researches it now is preferred by mathematicians to regard the square of the ratio of the minor axis by the major axis, which we denote here by m^2 , as negative for the ellipse and positive for the hyperbola. To adopt this would be simply to change our equation to:

$$y^2 = m^2 \cdot x \cdot (x - c); \text{ or } \pm y = m \sqrt{x \cdot (x - c)}.$$

It is not difficult to state a satisfactory reason for this convention, which might be thought arbitrary unless explained: The quantity m^2 also is equal to $e^2 - 1$; and e , the eccentricity, is greater than unity for the hyperbola, while it is less than unity for the ellipse, and reduces to zero for the circle.

The statements made in the last fifteen lines are added only for the purpose of precluding any possible objection that otherwise might be raised to the effect that the author is not well up in "Conic Sections" because he does not treat them according to the formulæ laid down in the books. The line of thought to which this additional discussion is intended to lead up is one which recognizes the supposition that the imaginary unit may be the factor the equivalent of which, in the equation of human life, distinguishes the purely spiritual from the corporeal part of our existence.

First of all, let us look at the features of correspondence with the line of thought as developed in the eight pages which were first sent out; this on the supposition that some satisfactory relation afterward may be discovered between the technically named "imaginary unit" and an actual spirit existence apart from the body. We have the ellipse, as described on page 7, corresponding approximately to the progress of human life from the cradle to the grave, and then an immediate starting up in the value of y , to give the hyperbolic curve, which (page 8) continually widens out with every increase in the value of x , the one coördinate becoming infinite when the other is so. The analogy here is to an eternal existence of the spirit after it leaves the body, but without any suspension of spirit life, or of manifestation of power, between death and a resurrection of either natural or spiritual body. The "grave" component, $\sqrt{x-b}$, (page 11, line 24) drops out from the equation given on page 8, and we have $c-x$ instead of $c+x$, with m becoming a multiplier instead of a divisor on the right hand side of the same equation. The last-named consideration simply is one of terms, because m may represent either a stated number or its reciprocal, so that the only essential change from the equation of page 8 to the one of page 14 consists in the making of b equal to zero while we retain its accompanying x ; and this means but that the after-death portion of the curve widens out a little less rapidly in the first case than in the second.

Next, we may consider the fact that the table on page 13 can be extended upward as well as downward. If, in measuring to the left from D, in the diagram on page 7, we take x equal to -1 , -2 , -3 , etc., in succession, the corresponding values of $c-x$ will be 11, 12, 13, etc., and the products are -11 , -24 , -39 , etc., exactly the same as those in the lower part of the third column in the table.

Hence, the values of y are precisely the same for equal distances to the left from D, and to the right from A, in the diagram; and the ellipse may be regarded as situated between two equal and opposite hyperbolas, each of which has DA (equal to c), for its major axis, one stretching out toward infinity to the left, and the other stretching out toward infinity to the right. Therefore, if the quantities in the extended table are analogous to different phases in the existence of man, they point to an existence previous to his birth as well as to one subsequent to his decease, indicating that the spirit is not called into being with the first animation of the body any more than it is extinguished at the death of the body.

This view is in harmony with the idea, which is probable in a scientific sense though far from being proven, that the sum total of force in the universe is constant, if that of matter be so. Also it harmonizes with that small part of "theosophic" doctrine which declares that the vital principle, the essential "Atman" which is held to be loaded with the "Karma," exists before the body is formed as well as persists after its dissolution. But the notion is at radical disagreement with the theosophic conception of a long series of sentient existences for the one mentality, and even more inconsistent with what is declared by Mrs. Besant to be an integral part of the theosophic doctrine; namely, that these sequent phases of existence are separated by long intervals of "sleep." The analogy rather would be with a gradual ingathering of vital force from the fund, which is infinite in extent while the process is infinite in duration, and with the theory that after a temporary concentration of that gathered force into bodily form it gradually dissipates into the vast fund, though the identity is not absolutely lost in any assignable period of time, because any such period falls short of infinity. Hence, the absolute Nirvana of Hindoo philosophy could not be attained by any one of those who aspire after it, so long as the Universe endures, unless the term of its existence be eternal.

According to the theory of Helmholtz, which many scientific investigators now are inclined to consider the most probable basic theory of the constitution of matter, the material atom simply is a whorl in an ether which pervades all known space, and must be supposed to be a perfectly elastic entity, which roughly may be likened to a jelly, though having no weight, and being in reality the only imponderable substance in Nature—if we are justified in speaking of it at all as

a substance. This ether is the medium that transmits, or through which are transmitted, vibrations from the constituent particles of one mass to those of another. And if we accept the whorl theory it follows that we must regard the material atom as nothing more or less than a differentiated ether, just as we must consider the protoplasm which is the fundamental material of organic life to be a differentiation from the inorganic atom. We then may fall back on the language of the calculus, in the absence of anything better, and state the inorganic and protoplasmic forms as the first and second differentials of the vast etheric integral—the “Constant” of which will be the “Great First Cause,” though we can not hope that scientific investigation ever will enable us to ascertain whether that Great Cause be personal or impersonal. Now, if we suppose that the employment of the imaginary unit corresponds wholly or in part to the process of differentiation, and that the ether itself is essentially positive, the inorganic form of matter must be deemed imaginary positive, and the protoplasmic form negative (because $i^2 = -1$). The protoplasmic then will be rational, and will need a negative multiplier to bring it into the state of the integral. It is well known that in celestial mechanics we have:

$$\text{Force} = \text{Mass} / r^2; = - d^2 s / dt^2.$$

If we dispense with the simile of differentiation, as being above the comprehension of those who have not had the advantage of a course of mathematical study which appears to be exceptional, we may conceive the following parallel, which can be drawn without resort to the language of the calculus: Starting with the previously stated conception that the state of the ether is essentially positive, and multiplying by the imaginary unit four times in succession, we shall reach the positive again, and may conceive the several results to correspond to conditions in the grand scheme of Nature, thus:

+ 1	corresponds to Ether.
+ $\sqrt{-1}$	" " Inorganic matter.
- 1	" " Organic matter,
- $\sqrt{-1}$	" " Unknown. (?)
+ 1	" " Spirit entity.

The last four expressions in the first column represent the “four roots of unity,” being the analytical values of radius unity at angular distances of 90° , 180° , 270° and 360° from the origin.

In regard to this comparison we remark that one well may hesitate at assigning a parallel to the fourth mathematical term. If the square root of minus unity be imaginary, its negative hardly is conceivable, and we may suppose it corresponds to some to us totally unknown mode of existence. Also, the third and fifth terms suggest the taking of the negative and positive values of y as collating with the inferior and superior parts of man's nature, the animal and the spiritual, represented by positions below and above the horizontal axis. To accept the latter idea would be to discard the suggestion (pages 8 and 10), about goodness and wickedness, and consider the whole of the varying breadths of the figure, measured in a perpendicular direction for successive values of x , as representing the measures of total force at different epochs in the term of our existence. Then follows the thought that the fifth term in the series is not necessarily identical with the first. They numerically are equal, but the last is the fourth power of the second, and a potential conversion is involved in a return from it to the original quantity if not to the original form. These analogies, and deductions from them, fitly may be described as "reasoning in a circle," but the process is not necessarily vicious on that account, though it can not be denied that, at least in one sense of the word, it is largely "imaginary."

It, however, is possible to conceive of the spirit essence returning to the ether condition, if not directly then, by another conversion not indicated in the preceding table of supposed changes. Then, in sequence to the line of thought sketched briefly in this section, we even may indulge a flight of fancy to the extent of supposing that man is a microcosm of the macrocosmic universe in a far wider sense than hitherto has been understood in the use of that phrase. One talks of the "eternity of matter," but that simply is because within the limits of human experience the elasticity of the atom is permanent, and rates of vibratory movement of atom or molecule vary only with temperature. It is legitimate to imagine that the duration of existence of an atom is "eternal" only in the sense that it lasts longer than the planet, as that of the earth compared with the life of an organism on its surface, and as the life of the organism with that of one of the countless millions of cells the aggregation of which makes up the form of animal or vegetable. Hence, one may venture to think it not impossible that the pulsations of the ether vortices which we call material atoms may decrease to the zero of pulsative activity in some portions of space, while more active in other regions,

in obedience to what we feel forced to believe is a law—that the sum total of energy in the whole of Nature's vast domain is a constant quantity. In this view of the case we may speculate on the possibility of a single solar system, or millions of such systems, springing into existence out of nothing (in the sense in which the ether may be spoken of as "nothing"), and after the lapse of millions of ages dying again into the same kind of nothingness, while the operation of creative force on the very same kind of nothingness is in progress in other portions of infinite space. This is a more comprehensive sweep, if not a more daring one, than even is the expansion of the nebular theory by its author into the thought that the universe as known to us may be only one out of a vast series, each of which is evolved from the material ruins of an immediately preëxisting one.

According to the enlarged view here suggested, though not insisted on, the life of a vegetable or animal cell, that of the aggregation of cells which constitutes a unit of animated existence as seen by the unaided eye, the existence of the planet whose surface is the theater of such vitality, that of the system to which the planet belongs, that of this clustering molecule and even of "the ultimate atom": each and all may be regarded as only temporary phenomena, the time occupied by the exhibition of which is no greater in comparison with an eternity of duration than is the massing of vapor drops in the atmosphere and the collection of electric force due to the gathering of those vapor specks into raindrops that form a passing shower.

We can reason strictly and surely in regard to the protoplasm which is the physical basis of all life, animal as well as vegetable, and of human life equally with that of the lowest forms of animated existence, that it always is dying, and could not live unless it died: such death involving a resolution into its mineral and lifeless constituents, which subsequently are so scattered and diffused that the recombination of the same material into a consequent individual entity identical with the previous one, is highly improbable if not absolutely impossible. And so we may reason toward the theory that those constituents themselves ultimately resolve into the universal ether. To think along similar lines in regard to the vital force is not more illogical than are speculations about the supposed possibility of a fourth dimension in space, and hardly can it be more conclusive. But it may be worth while to note that the ability to indulge in such speculative imaginings furnishes a by no means weak argument in favor of the belief that the human spirit is immortal.

It is fair to suppose that: (1.) The Christians of the Apostolic age fully expected that many of their own number would live till the "Second Coming," and would welcome their Lord in company with those who had "fallen asleep." (2.) That when several years had elapsed without bringing the desired consummation some began to doubt, and not far from a quarter of a century after the Crucifixion Paul wrote to the Corinthians with an express purpose of answering some among them who said "there is no resurrection of the dead": these objectors reasoning to the effect that the bodies of many of the witnesses must have become completely disintegrated, rendering impossible such a resurrection as they had been led to expect, and Paul undertaking to show, for the first time, that such objection was not a valid one, the body that is buried being "natural," while the one to be resurrected will be "a spiritual body." (3.) That notwithstanding this explanation the general belief in the churches during many centuries seems to have been in a reanimation of the body that was buried, and this appears to have been the principal reason why the churches have systematically frowned on cremation. Within the last quarter of this century a distinctly forward step has been taken by a few clergymen in admitting that the statement of the case made by St. Paul in his first Epistle to the Corinthians is not inconsistent with belief in the possibility of resurrection from the ashes of a body that has been cremated.

The reanimation of many millions of human bodies, each of which when "raised up" shall be composed of the very same material atoms and molecules that made up its substance in a former life, would be a miracle indeed: involving what well may be designated as a physical impossibility. The doctrine of "the resurrection of the body," on the plan stated by St. Paul, is not open to the same sweeping kind of objection; but it does not appear to the author to be in line with the average trend of modern scientific thought. Whether or not the Pauline resurrection of a spiritual body, if it occur at all, will be simultaneous, and at the sound of an archangel's trumpet or otherwise, scientific research is powerless to find an answer. But the truly scientific man hardly will dare to assume the responsibility of asserting that such resurrection is impossible—knowing, as he does, how easy it is to find instances of seeming folly in one age becoming recognized as wisdom in a succeeding one: and vice versa. It was remarked, a long time ago, that the student of science ought not to feel sure of anything in regard to which there is a reasonable doubt.

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